AUDIO MEDIA
Professional Audio in Production

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Broadcast audio special

Discover the latest trends and technologies in our audio for broadcast guide p15

IN THIS ISSUE

SOUND LIBRARIES
Are composers increasingly relying on in-the-box solutions? p28

CHALE ABBEY
We visit the latest addition to the Isle of Wight's thriving music scene p30

TECH FOCUS
DAWs and DAW controllers p34

INTERVIEW
Garry Schyman talks Bioshock Infinite, Game Music Connect, and more p50

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Meet the team

Deputy Editor – Jake Young
jake.young@intentmedia.co.uk

Managing Editor – Jo Ruddock
jo.ruddock@intentmedia.co.uk

Commercial Director – Darrell Carter
Darrell.Carter@intentmedia.co.uk

Production Executive – Jason Dowie
jason.dowie@intentmedia.co.uk

Designer – Jat Garcha
jat.garcha@intentmedia.co.uk

Press releases to:
pressreleases@intentmedia.co.uk

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"I felt so involved when experiencing Dolby Atmos in the home theatre. Just like the cinema, sound came alive from all directions, including overhead."

I want to open by thanking Jory Mackay, who moved back to his home in Canada recently, for making work on 13 issues and the website of *Audio Media* so enjoyable. In the editor's comment from last issue Jory talked about the public appeal of immersive audio, which I'm now familiar with having attended a Dolby Atmos Everywhere event and experienced Atmos for the living room at Dolby House, London in August.

So how is the company bringing Dolby Atmos from the cinema – which has real overhead speakers, lots of speaker opportunities, and massive rendering power – to the home? In short, tools to author Dolby Digital Plus and Dolby TrueHD bitstreams with Atmos spatial coding inside have been distributed to post-production and content encoding houses, and the company has also emulated ceiling speakers with up firing speakers, which – at a slight angle – aim sound up to the ceiling so that it comes down to the listening section of the room.

I felt so involved when experiencing Dolby Atmos in the home theatre. Just like the cinema, sound came alive from all directions, including overhead. There was a little bit more precision with the ceiling speakers, but there was more spacious diffuseness with the up firers. One was not a compromise over the other though. They were just different, and you'd be happy with either.

We read a lot about IBC while organising this issue, including the news that DTS will be bringing Headphone:X, its virtual surround sound technology that transforms the audio experience on headphones, to media players. But immersive audio isn't the only thing to look out for at the Amsterdam show. The International Guide to Broadcast Audio starts on page 15, with its IBC Preview including some tips on making the most of your trip. Look out for more on immersive audio in upcoming issues of *Audio Media*.

Back to this issue and it's great to see that distinguished recording engineer and consultant John Pellowe is to be given the Lifetime Achievement trophy at the Pro Sound Awards on 25 September. In addition, Miloco will accept the Grand Prix, which recognises a company or organisation that has built up an impressive portfolio of work, at the ceremony. The acknowledgement comes as Paul Epworth's The Church Studio 2, a Miloco construction and studio, is completed. In addition the company has recently introduced new and used recording studio equipment seller and broker Miloco Gear, pro-audio equipment repairs expert Miloco Repairs, drum samples download site Drumdrops, and more.

The Pro Sound Awards closely follows Game Music Connect, which returns to the Purcell Room at London's Southbank Centre on 24 September. In an Interview on page 50, maestro Garry Schyman reflects on his multi award-winning score for *BioShock Infinite* before his 'BAFTA Interview' at the second annual international video game music conference. ■

Jake Young, Deputy Editor,
@jakeandrewyoung

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CONTENTS

TECHNOLOGY NEWS

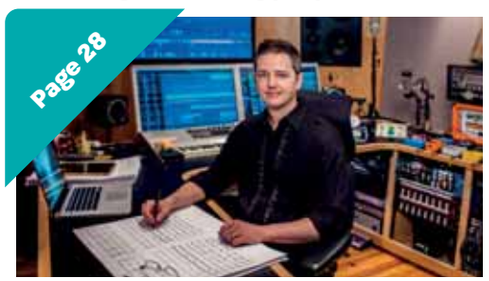
- Bock Audio captures U47 sound 6
- Blue announces Mo-Fi headphones..... 7
- Rode releases NT-USB mic..... 8

INDUSTRY NEWS

- Full Harman setup for urban festival 10
- PSA Lifetime Achievement award winner named..... 11

FEATURES

Sound Libraries 28
- Jerry Ibbotsen looks at whether composers are coming to increasingly rely on sound libraries



Chale Abbey Studios 30
- Jake Young takes a trip to the Isle of Wight to visit this new facility

TECHNOLOGY

Focus:

DAWs and DAW Controllers 34

Reviews:

Dynaudio BM Compact mkIII 42

RME Fireface 802 44

Slate Raven 2.0 46

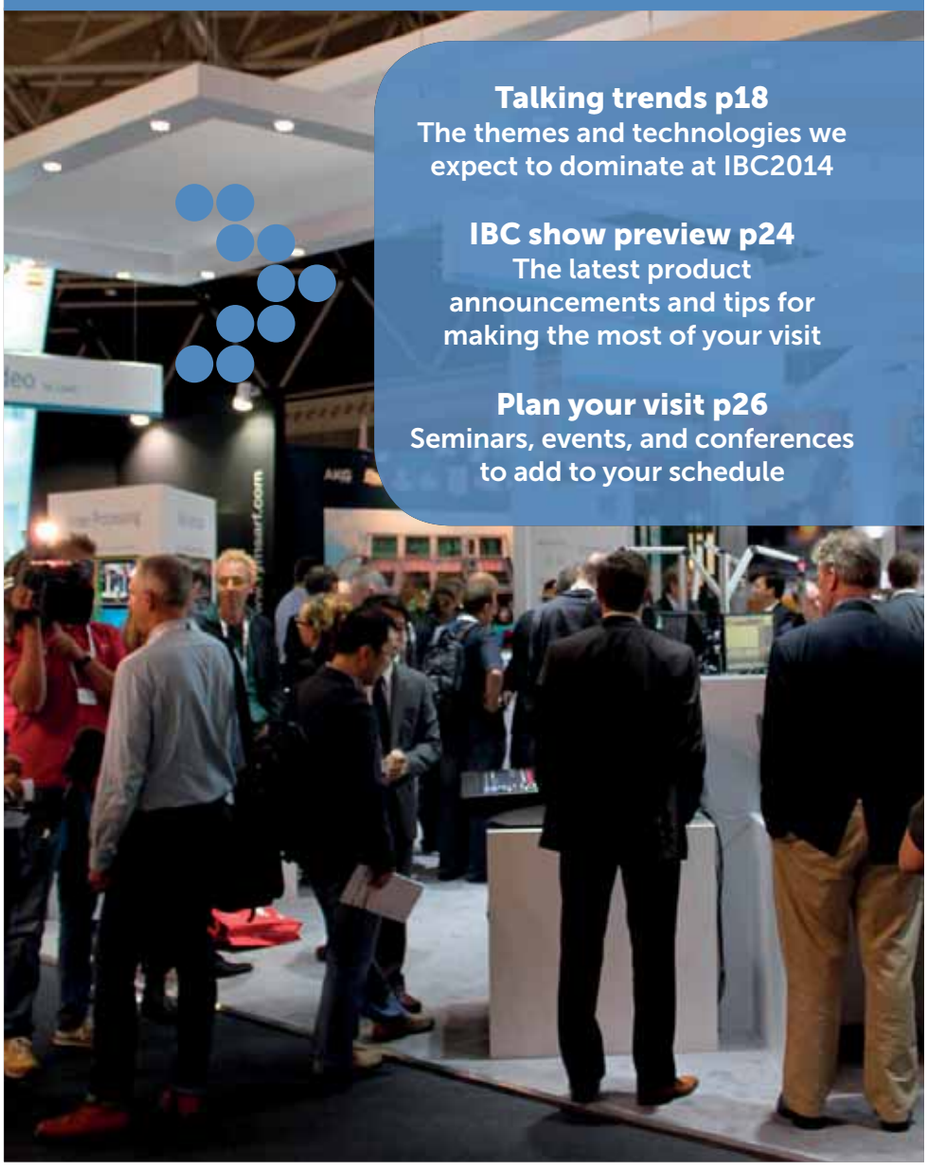
SoundField SPS200 48

ALSO INSIDE

GEO FOCUS: Netherlands 12

INTERVIEW: Garry Schyman 50

BROADCAST AUDIO GUIDE 2014 p15



Talking trends p18
The themes and technologies we expect to dominate at IBC2014

IBC show preview p24
The latest product announcements and tips for making the most of your visit

Plan your visit p26
Seminars, events, and conferences to add to your schedule

ADVERTISERS INDEX

Apollo	39	NewBay Connect	31	Rode	25
Aspen	3	Orban	23	Sennheiser	17
CES	35	PLASA	52	Sony	19
Genelec	2, 27	PMC	37	Stagetec	7
IBC	47	Pro Sound Awards	13	Studer	21
Lawo	5	Radial	51	Studiomaster	33
Lynx	8	Richmond Film Services	11	TC Electronic	16
Mogami	45	Riedel	9	TVBAwards	14

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Bock Audio Captures a Tube 47

David Bock, the man behind Bock Audio, has captured the sound of the vintage Neumann U47 tube microphone in the new Bock 407. Bock gained most of his critical insights into the 47's sound by servicing vintage units in his shop.

"The Bock 407 has that smooth, creamy midrange you associate with a 47, along with the signature proximity effect that vocalists like Robert Plant and Frank Sinatra used so famously," said Brad Lunde, president of TransAudio Group, which will distribute the Bock 407 in the United States. "It sounds stunning. Importantly, David designed the 407 to use new 'old stock' materials: materials that are in current production and that replicate the properties of vintage materials that are no longer being made. The Bock 407 is affordable, consistent, reliable, and, when the time eventually comes, easily serviceable."

The Bock 407 borrows its power supply and amplifier from the Bock 507 and adds a custom k47-type capsule that David Bock prototyped and adjusted to meet requirements. The microphone has a cardioid pickup-pattern and ships with a remote power supply, a professional spider-type shock mount, and a custom 20ft cable that connects the microphone to the power supply.

The Bock 407 is shipping now.

www.transaudiogroup.com

TC Launches System 6000 Integrator Plug-in

TC Electronic has launched a complete integration solution for its System 6000. The System 6000 Integrator plug-in allows users to save and reload the complete settings of their System 6000 as part of virtually any DAW or NLE project just by using the Ethernet connection, which is already there.

Through standard automation it is also possible to automate preset changes during playback, which means that users are able to get more out of the four processing engines of System 6000 than ever before. For instance, one engine may apply subtle eight-channel reverb in one scene and extraordinary DXP dynamics processing or UnWrap HD in the next.

"We are very excited that users are now able to integrate their System 6000 with their DAWs and NLEs," said TC Electronic's Thomas Valter, VP of business management, broadcast, and production (pictured). "What may seem like a minor addition to the platform is in fact a game-changing move that adds a whole new dimension to System 6000."

Based on the Ethernet protocol, multiple System 6000s may be detected and used on the same network, allowing users to take advantage of powerful communication lines between their DAW/NLE and one or more System 6000 mainframes/TC Icon remote hardware or software.

TC Electronic is offering a free 14-day trial for all System 6000 users.

www.tcelectronic.com

Propellerhead Unveils Reason 8

Propellerhead Software has announced a new version of its Reason music production platform. Reason 8 features a redesigned user interface and streamlined workflow.

Leo Nathorst-Böös, Propellerhead product marketing manager, said: "For Reason 8, we've taken everything people love about Reason and introduced a streamlined user interface that makes it easier for new users to get started, and more fun for seasoned users to work faster."

The redesigned user interface offers a smooth creative flow, while the new browser and search window provides immediate drag-and-drop access to samples, loops, and patches. Expanding on Reason's included collection of instruments and effects are the new amps from Softube, bringing a variety of guitar and bass tones to the rack. Workflow improvements make for a more streamlined music creation experience, allowing musicians and producers to move quickly from initial idea to a completed song. Reason 8 also provides an expanding selection of Rack Extension plug-ins available in the Propellerhead shop.

Reason 8 will be available for purchase worldwide on 30 September 2014.

www.propellerheads.se

Trio of Interfaces from MOTU

MOTU has announced three new Thunderbolt audio interfaces with complementary I/O configurations, A-D/D-A conversion with very high dynamic range, 48-channel mixing, DSP effects, and AVB Ethernet audio networking for system expansion.

Based on a new shared technology platform, the 1248, 8M, and 16A differ only in their analogue I/O configurations. The flagship 1248 offers 8 x 12 balanced TRS analogue I/O, four mic inputs with digitally-controlled individual preamps, two front-panel hi-Z guitar inputs, two independent phone outs, and stereo RCA S/PDIF digital I/O. The 8M provides eight balanced TRS analogue outputs, plus eight mic/line/instrument 'combo' style inputs individually equipped with digitally controlled preamps, 48V phantom power, pad, and MOTU's V-Limit overload protection. The 16A is packed with 32 balanced TRS analogue connections (16 inputs and 16 outputs).

www.motu.com

Blue Announces Mo-Fi Headphones

Blue Microphones has released Mo-Fi, a headphone that features a built-in 240-milliwatt amplifier matched to 50mm drivers.

Mo-Fi lets users choose three amp settings – On, On+, and Off. When switched to On, Mo-Fi activates the amp, On+ engages the amp's analogue low-frequency enhancement circuit, and Off puts Mo-Fi in passive mode, for connecting to high-output studio gear.

Instead of using a fixed spring-loaded headband structure, Blue invented a multi-jointed headband that provides comfort and adjustability for a variety of head shapes and sizes. The ear cups stay parallel at all times.

For height adjustment, Mo-Fi's pivoting-arm design allows for a range of motion. Blue incorporated a headband adjustment knob that allows you to dial-in the pressure and tightness.

The rechargeable battery, charged via micro USB, enables 12-14 hours of playtime. The headphones automatically turn off to save power when they have been removed. If the battery runs out, Mo-Fi will continue to play in the Off setting.

www.mofiheadphones.com
www.bluemic.com

Focusrite Goes Solo

Focusrite has created Scarlett Solo: the most affordable member of the Scarlett USB audio interface family. Compact and lightweight, Scarlett Solo has a dynamic range of over 105dB and the same preamp quality and signature red metal case as the rest of the range. Unlike the 2i2, which has two combi XLR inputs, Solo has one mic pre and one line input.

www.focusrite.com

RX 4 New from iZotope

Launching this month, RX 4, the latest version of iZotope's audio repair toolkit, offers enhanced features and intelligent new modules to optimise workflow. Features include Clip Gain and the Dialogue Denoiser (formerly only a feature in the Advanced version of RX), plus new RX 4 Advanced modules such as Leveling and EQ matching.

Look out for our review of the update in the November issue of *Audio Media*.

www.izotope.com

New RØDE NT-USB

RØDE has announced its newest microphone, the NT-USB – a studio-grade microphone with the convenience of a digital USB interface.

The versatile side-address microphone is designed for recording musical performances in addition to spoken applications such as podcasting and voice-over.

It is compatible with all mainstream recording applications on Windows- and Mac OS-based computers, as well as iPad using RØDE Rec, GarageBand, or any other recording app that accepts an external microphone. Use on the iPad requires a suitable USB connection adaptor, such as the Apple Camera Connection Kit.

The body of the NT-USB features a zero-latency stereo headphone monitoring (3.5mm) jack, which allows users to monitor the mic input in realtime, along with dials to adjust the monitoring level and mix between the computer/iPad audio and the microphone input.

The NT-USB is supplied with an extended 24-month warranty, which is free of charge to customers who register their microphone on the RØDE website.

www.rodemic.com

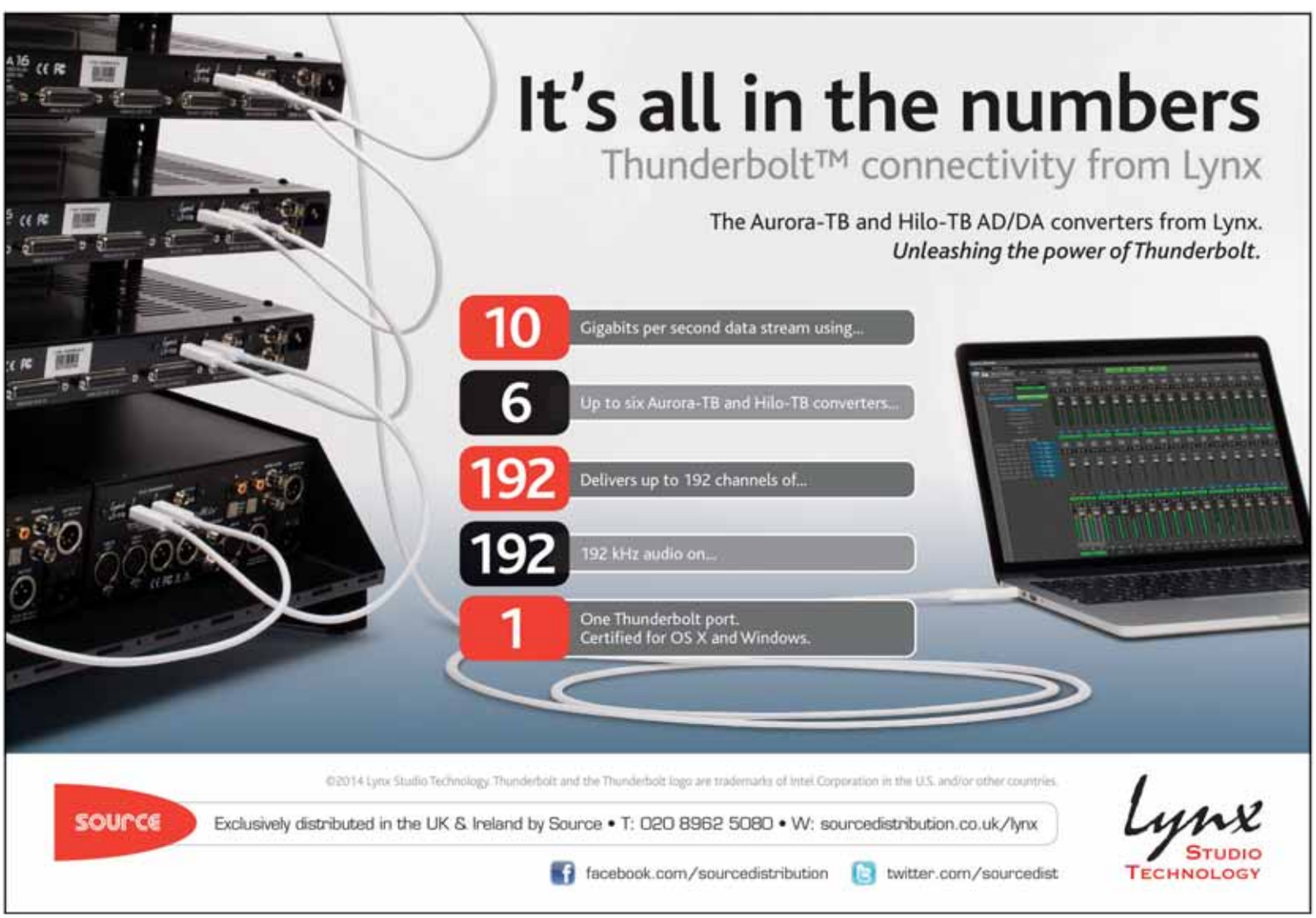
Telefunken Introduces Extreme Isolation Headphones

Telefunken Elektroakustik has released the THP-29 Extreme Isolation headphones, designed for both the studio and live sound environments. Ultra high fidelity, high-input 40mm speaker drivers featuring TruSound Tonal Accuracy are integrated with 29dB of eco-friendly natural passive isolation. The result is a headphone designed to protect the eardrums from damage and improve the recording, performing, and listening experience.

The THP-29s are said to be ideal for live mixers who need to block out monitor speakers, or drummers who need to be able to hear the mix without setting their volume at an unreasonably high level. The closed back design, lightweight construction, adjustable head strap, and padded ear cushions provide optimum comfort during lengthy recording or listening sessions. The advanced isolation capabilities eliminate extra bleed in the recording studio while giving an average of 29dB of noise reduction over a wide frequency range. The THP-29s can also be used as critical mixing headphones during post production.

The headphones have been developed in partnership with Direct Sound.

www.telefunken-elektroakustik.com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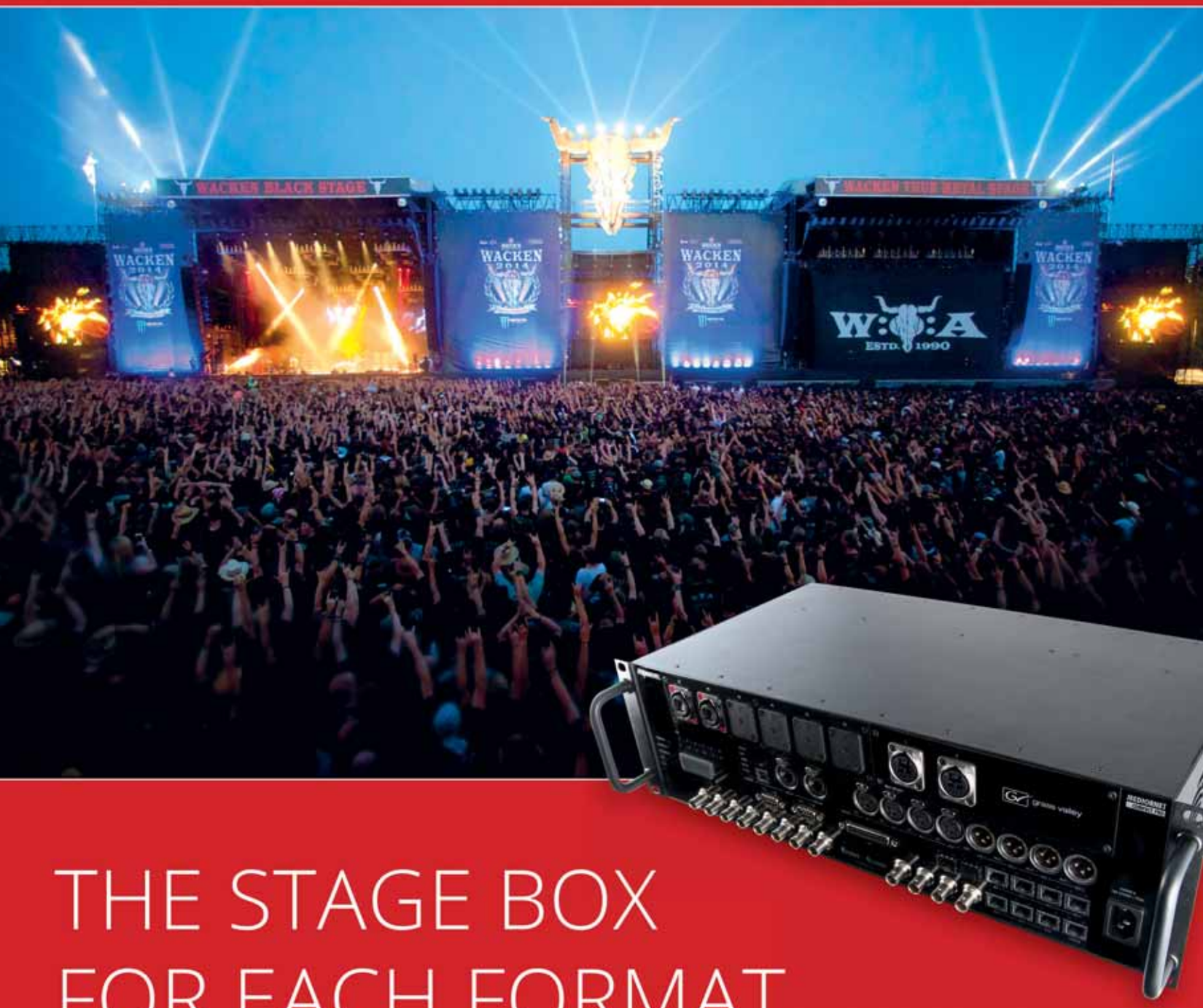

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LIVE SOUND

Full Harman Kit for Urban Forest

Taking place in Dalston, north London, the Kopparberg Urban Forest Festival ran for a month from 2 July until 3 August. It featured a complete Harman sound reinforcement system all provided in partnership with the manufacturer's UK and Ireland distributor, Sound Technology.

The main PA featured eight JBL VTX V20 loudspeakers, four S25 subwoofers, complemented by two VTX F15s plus VTX F12, VTX F18S, and STX812M stage monitors. The system was powered with two Crown VRack 4x3500 HD systems and an I-Tech 5000 HD amp.

"Because we were able to work with the designers of the Kopparberg stage from an early point, we were able to get the PA suspended in a good position that meant we were able to provide excellent coverage for the dance floor area, but also get a clear sound at the back of the open area," said Ed Jackson, application engineer, tour sound, EMEA, Harman Professional. "There have been no real problems with the venue acoustically. The PA has been arrayed so that it is firing at the audience rather than at any of the tents' reflective surfaces, and for a stage that has just popped up in Dalston, I think that it sounds great."

JBL's VTX F Series monitors are the result of collaboration between JBL and New York rental company Firehouse. "The F Series has got the D2 high frequency driver

that is used in the VTX V25 cabinet and the JBL M2 studio monitors," said Jackson. "These drivers use a ring diaphragm rather than a conventional dome. These give a smoother frequency response across the high frequencies, and a lot less of the second and third order harmonic distortion that we have always taken for granted when listening to dome tweeters."

Promoter MAMA & Company also relied on AKG for microphones, including the D12VR, C1000S, D40, D5, DSR700 V2, and DHT700 D7 models. FOH and monitors were mixed through a Soundcraft Si Performer 2 digital console, which was controllable via the Soundcraft ViSi Remote app, enabling iPad control of the console via a single wireless network.

The event featured over 50 artists including We Were Evergreen, Lucy Rose, Little Dragon, and Gaz Coombes.

www.harman.com

RENTAL

OB Companies Enhance Mic Requirements

According to hire specialist Richmond Film Services, sports outside broadcast companies are using different methods and microphones to cover events.

The business provided NEP Visions with over 60 microphones to cover a major tennis tournament, including 16 Sennheiser MKH 8050 microphones and 13 MKH 418-S stereo microphones. NEP also booked 121 microphones for another sporting event in Scotland and concurrently 22 Sennheiser MKH 416 microphones for an event in Dublin.

Another OB company took 16 microphones to Scotland including eight Neumann RSM 191 switchable stereo microphones, and a New Zealand broadcaster used 12 Sennheiser 5000 series radio microphones.

Golf tournaments also required the use of Sennheiser MKH 416 and MKH 816 mics.

www.richmondfilmservices.co.uk

RECORDING

Heard Around Town

Highlights from **RAK Studios** in 2014 include Steve Fitzmaurice having a number one with the Sam Smith album he recorded in Studio 1 and returning with Eliza and The Bear and Mary J Blige, Neil Cowley Trio's album *Touch and Flee*, Labrinth recording material, Nerina Pallot who is making an EP every month this year, and Dan Grech-Marguerat coming in with projects including Circa Waves.

Brighton Electric is opening Studio 2 at Tramway house in October. "Work is well under way currently," reports Jimi Wheelwright. "We have created a second control room right by the main studio on the south wing, this is tied in to both live rooms – the second of which has been totally re-treated – like Studio 1. It will be another simple set up, centred around the Neve BCM 10 and a PSM12 sidecar consoles, ATC SCM25s, and Tools 10."

French medieval songwriter and singer Luc Arbogast was at **Studios La Fabrique** in Provence to record the vocals of his next Mercury Records album.

London-based country singer-songwriter Ilana Katz has been working in **Resident Studios**' Studio A in a session run by engineer Caradog Jones.

Sinitta's *So Many Men So Little Time* single was recorded and mixed at **Select Studios** in Wood Green, London.

To celebrate the 20th anniversary of Underworld's *dubnobasswithmyheadman*, the record has been remastered by Miles Showell at **Abbey Road Studios** for a deluxe reissue on CD and vinyl, working closely with Rick Smith. Also at Abbey Road, Wings' classic albums *Venus and Mars* and *At The Speed Of Sound* have been remastered for deluxe re-issue. *Venus and Mars* was remastered by Steve Rooke and Sam Okell, and *At The Speed of Sound* by Steve Rooke and Guy Massey. The re-issues include demos and unreleased tracks, mastered by Alex Wharton. Audio restoration for the projects was carried out by Simon Gibson.

Want your studio news featured here? Send details to jo.ruddock@intentmedia.co.uk

INTELLIGENCE

NewBay Media Launches NewBay Connect

NewBay Media, publisher of *Audio Media*, has launched NewBay Connect, a digital resource library for the pro-audio, pro-AV, and broadcast sectors. Free and easy to use, www.newbayconnect.com provides visitors with a range of information, including white papers, analyst reports, briefings, tutorials, and web seminars. Categories covered within the library include Networking, 3D Audio, Live Sound, and Studio Sound.

For more information on NewBay Connect and how to get your content listed, contact Ryan O'Donnell, +44(0)20 7354 6000, **ryan.odonnell@intentmedia.co.uk**.

www.newbayconnect.com

EVENT

John Pellowe to Receive Lifetime Achievement Trophy at Pro Sound Awards

Renowned recording engineer and consultant John Pellowe will be named as the recipient of the second Lifetime Achievement Award at the Pro Sound Awards on 25 September.

"It's a terrific surprise and a huge honour to be selected for this prestigious Pro Sound Award," said the Grammy Award winner.

John Pellowe's international career has encompassed recording engineering, live broadcast engineering, concert sound reinforcement, and acoustics. As a recording engineer for Decca he made over 200 albums with many of the world's best-known artists in venues renowned for outstanding acoustics.

As sound engineering director for opera legends Luciano Pavarotti and The Three Tenors (Pavarotti, Domingo and Carreras), he participated in more than 30 world tours, engineering and mixing 300 major concerts and numerous live TV and radio broadcasts. Credits include the world's biggest selling classical album, *The Three Tenors in Concert*, live from Rome.

Since 2006 he has worked for Meyer Sound Laboratories, helping establish the Constellation Acoustics System, a technology whereby a concert hall's acoustic can be optimised to suit different types of music or performance.

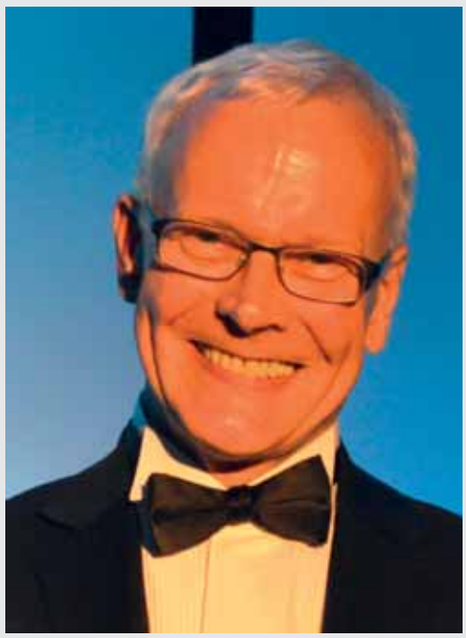
"I could never have been considered for this Pro Sound Award had I not been supported by a myriad of gifted and hard-working colleagues throughout the years," said Pellowe, "and I would like to express my deepest appreciation to each and every one of them."

John Pellowe will receive his trophy at an event to be held at the Ministry of Sound in London on 25 September. **To buy tickets visit www.prosoundawards.com/buy-tickets**.

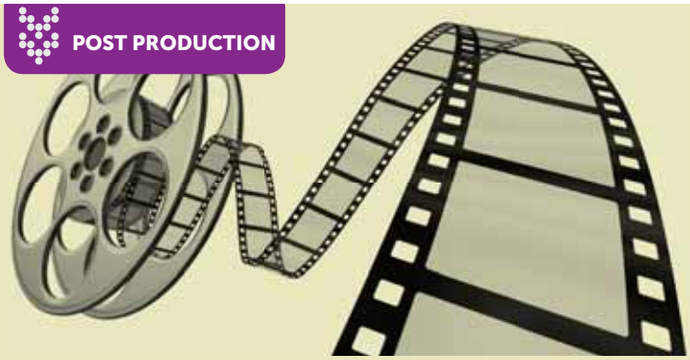
Sennheiser is headline sponsor of the awards. A limited number of other sponsorship opportunities are still available.

Contact ryan.odonnell@intentmedia.co.uk for more information.

www.prosoundawards.com



POST PRODUCTION



From the Cutting Room

Jungle continues to be busy with a range of work coming through the door. Sound designer Owen Griffiths completed the mix on the new M&S: Back to School campaign for RKCR/Y&R, Chris Turner designed the sound for the new Kellogg's Rice Krispies Imagine That campaign, and Dave Poole worked on a new spot for eHarmony. On top of that, Weston Park Primary School visited Jungle Studios to learn about the science of sound.

Molinare is currently in final post on the much-anticipated BFI and BBC Arts documentary feature film *Hockney*. BAFTA craft award-winning re-recording mixer George Foulgham and his team worked closely with director Randall Wright to create a soundscape that reflects the genius of the iconic British artist David Hockney. The film's score was composed and conducted by the Ivor Novello award-winning composer John Harle. Picturehouse will be releasing the film in cinemas in November 2014.

Smoke & Mirrors has installed three Avid S6 consoles. The control surfaces, supplied by HHB/Scrub and fitted in AKA Design furniture by system integrator wire broadcast, now form the centrepiece of the newly-established three-studio, two voice-over booth complex in Soho.

Want your audio post news featured here? Send any relevant stories to *jo.ruddock@intentmedia.co.uk*

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POPULATION: 16.8M

Trading Nation

Jake Young finds that the Dutch pro-audio industry is very versatile for a small country.

The Dutch are unique people when it comes to languages. Almost 90% speak English, and most people know their way around in German and French as well. Throughout history, the Netherlands has been an internationally focused country, and the Dutch are always expanding trades. While they are aware of the small size of their country, they see themselves as the gateway to Europe, and this remains the case when it comes to the pro-audio industry.

Live

Like everything, the live industry is affected by the economic situation. "A lot of small festivals don't exist anymore due to financial problems," says audio engineer Colin Pool. "Also, in the past you'd be asked for a gig about a month in advance, now you're approached very late, sometimes only a week before the show."

Holland has got quite a few popular bands and artists that play at festivals. There are even festivals where only Dutch bands perform. Previous success stories include Dope D.O.D, Jacco Gardener, Skip & Die, and more recently Taymir, who after playing their first ever gig in the UK, bagged themselves a deal with one of the top booking agents The Agency Group. Bigger international artists will also be seen on many festival lineups in the Netherlands. For example, the Rolling Stones played at Pinkpop in June.

Pool reveals good sound is very important: "In the last couple of years a lot of venues invested in new equipment and foreign engineers talk a lot about the good situation here in Holland. Plus, Dutch people complain a lot, so when the sound isn't good, they will tell you right away. I think in the future the decibel regulations will be increasingly important so system design and system engineering will be more important than ever."

Over the past few years there has been a big change in volume restrictions. At outdoor festivals the maximum decibel levels are significantly lower than before. Now almost every festival has an external company that is monitoring the volume levels. The company co-operates closely with the system engineer to retain the volume level but not let it affect the sound quality and experience of the audience.

"Because of regulations and so on, the sound limits, which are imposed by local communities, have decreased in the past 10 years," says Seth Mook, head of technology at Amsterdam festival Uitmarkt. "Some audiences are saying that there is no feel anymore. On the other hand I also hear audiences saying that it is so much better now since the concerts are not so loud anymore."

On the technology side, DiGiCo and Midas digital systems are seen more and more. "Almost every big Dutch band is touring with DiGiCo, because the largest rental companies in Holland are using those," says Pool. "A lot of smaller venues are purchasing Midas PRO2s. At the bigger festivals and venues you still see Heritage and XL series'."

Studio

The market for studios in the Netherlands is largely healthy. The dubbing market is saturated but stable, with a good number of dubbing companies, and a healthy amount of work. Patrick Ulenberg, MD at dubbing specialist Creative Sounds, has noticed it is always hard work to get the attention of video production companies. "Many video production companies take care of their own audio chapter in post production," he says. "This often results in audio being supportive to the picture, instead of being the enrichment it is supposed to be."

The niche dubbing market has gone through quite a change in the past couple of years. "Budgets went down, costs went up," says Ulenberg. "Studios in general are challenged to discover different ways of working to match the available budgets. Nowadays video and audio is instantly synced, so turnaround of a project has increased tremendously, for instance."

The internationalisation of dubbing services has caused local studios to grow. Ulenberg: "A couple of years ago the dubbing market was a local market. We only served the Dutch/Flemish-language territory. But due to large international, multilingual media companies entering this local market, most studios were challenged to deliver more language versions for the same production, in order to secure their position."

Kloaq, a two-studio audio production company located in Amsterdam and Rotterdam, has made quite an effort to keep afloat. "With the installment of the latest government in the Netherlands there has been a huge cutback in subsidy money for all sorts of cultural institutions," says co-founder Adrian Vrijhoef. "That has an effect on every musician, studio, and technician working in the industry, which leads to more pressure on the market." ■

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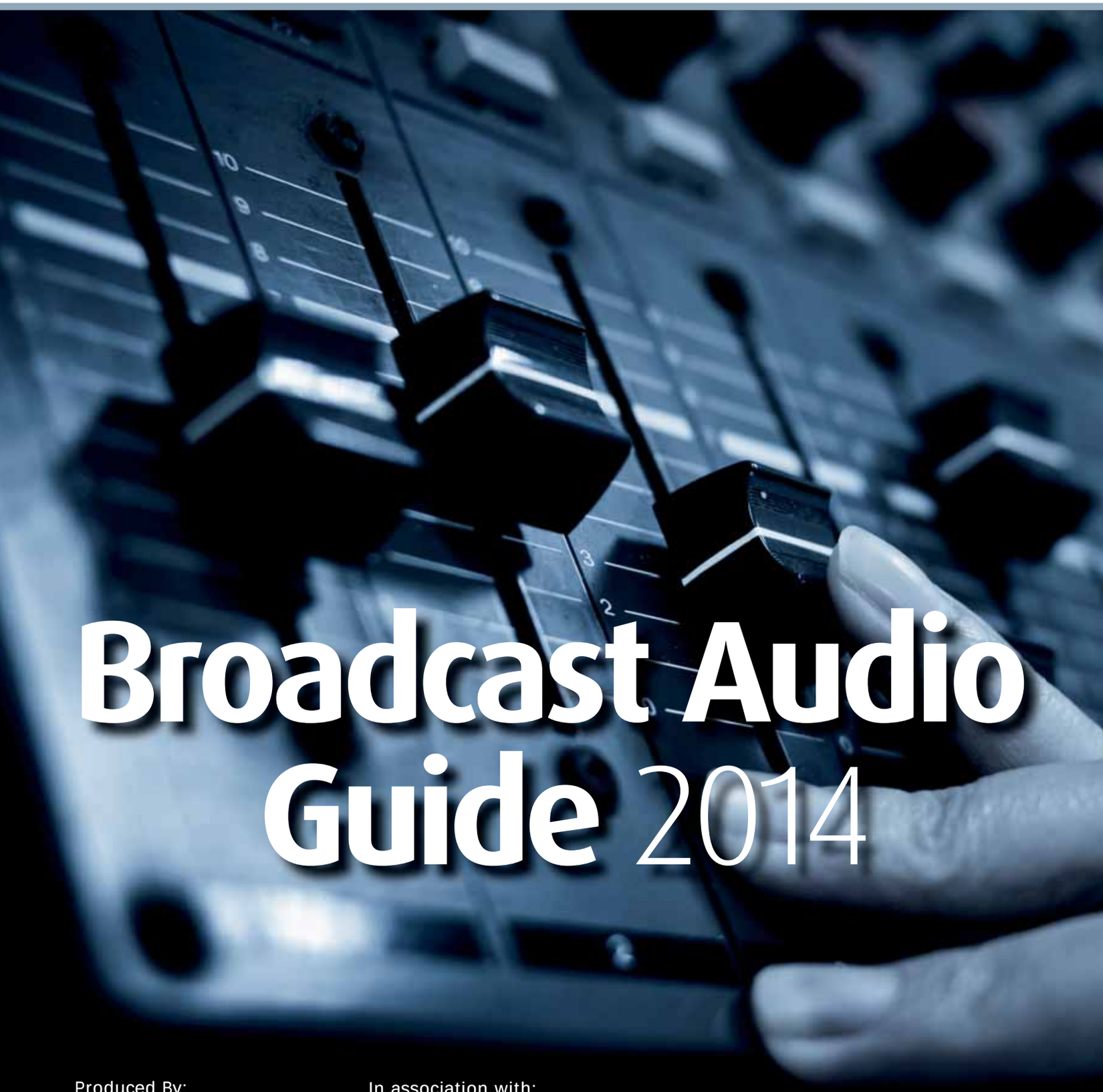

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CONTENTS

- 18 Talking trends – the latest developments in the audio for broadcast market
- 24 IBC preview – product news and tips on making the most of your time in Amsterdam
- 26 Plan your visit – We pick some seminars, keynotes, and events you won't want to miss

MEET THE TEAM

- Commercial Director
  Darrell Carter
  darrell.carter@intentmedia.co.uk
- Managing Editor
  Jo Ruddock
  jo.ruddock@intentmedia.co.uk
- Deputy Editor
  Jake Young
  jake.young@intentmedia.co.uk
- Account Manager
  Karma Bertlesen
  karma.bertlesen@intentmedia.co.uk
- Production Executive
  Jason Dowie
  jason.dowie@intentmedia.co.uk
- Designer
  Jat Garcha
  jat.garcha@intentmedia.co.uk

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Welcome to the International Guide to Broadcast Audio, updated for 2014 with everything you need to know about the latest trends and technologies in the market.

I'm sure many of you are reading this at IBC2014. With the show looking to be bigger and busier than ever we've enlisted *IBC Daily* correspondent Will Strauss to highlight some of the major trends on the showfloor.

As he says, it's difficult to visit the Amsterdam show and not get involved in one conversation about loudness. If you want to see the latest products aiming to ease the transition from tape to file-based delivery, turn to page 18.

Aside from this, intercom and talkback continues to be big business with Riedel keeping their latest innovations under wraps until the show and Trilogy, Clear-Com, and more launching new products.

Away from the showfloor, there's much of interest for the pro-audio professional in the conference and seminar programme. Whether your interest is 3D audio, the future of the broadcast industry, or you just want to experience a movie in 4 fl 3D Christie 6p laser projection and Dolby Atmos, we have the information you need on page 26.

Finally, some industry stalwarts offer their tips on where to go, what to do, what to avoid, and what to look out for at this year's show.

This Guide, along with the others in the series (DAWs & Plug-ins, Theatre Sound, Monitors & Headphones, Microphones, and Consoles) are *Audio Media* projects and are designed to help you navigate your way through the swaths of pro audio products available.

For more details visit www.audiomedia.com

Joanne Ruddock, Audio Media

ADVERTISER INDEX

Advertiser	Page
Genelec	27
Orban	23
Rode	25
Studer	21
Sennheiser	17
Sony	19
TC Electronic	16
TVBAwards	14

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Look out for something special from Lawo at IBC

Talking Trends

Console makers pooling resources, effective IP-based networking, and automated loudness control: these are just some of the trends to look out for at this year's IBC, writes Will Strauss.

The audio for broadcast market is set to be well represented at IBC2014 with new technologies and market moves both expected to provide talking points.

Consoles

Calrec (8.C58), fresh from being bought by private equity firm Electra Partners in March (more of which later), will have its new Summa audio console at IBC.

Essentially a cut-down version of the Apollo and Artemis desks, it is, according to the marketing blurb, "designed to ensure intuitive operation in live broadcast applications [and] simplifies even complex workflow tasks, such as creating mix-minus feeds, with a highly intuitive GUI suitable for a broad range of operator levels".

The console is controlled via a high-resolution 17in multi-touch screen that works like a tablet. The console's other large displays are fully configurable to display bus, output and loudness meters, and they feature dedicated metering, routing, and processing information for each fader.

While DiGiCo (8.D70) will be showing off its consoles at IBC too, it may also be answering questions about its merger with Calrec and Allen & Heath.

DiGiCo managing director James Gordon is set to become chief executive of the thus-far unnamed group, while the current chairman of Allen & Heath and Calrec, Malcolm Miller, takes on the role of chairman.

Gordon is said to have "bold plans for the group" but maintains that it is "imperative that each company maintains its own independence and style". The plan for the future is to share technology and resources across the group and allow some interconnectivity across the product lines. It will certainly be an impressive R&D set-up if all three work together.

For now though, and for IBC, DiGiCo says it will be "business as usual" with the SD7, SD10, and SD11 consoles on show, all with broadcast-specific software.

The SD7 is the flagship model, offering what the company calls "mind-blowing I/O capabilities". It makes use of the company's proprietary Stealth mixing and routing engine and Super FPGA technology, has three 15in high-resolution touchscreens, each of which accommodates a bank of 12 faders, and features 256 processing paths at 48kHz/96kHz (or 128 at 192kHz). A powerful beast, it offers eight times the oomph of the D5 Live.

At the other end of the scale, the SD11 is the smallest by far of all the DiGiCo consoles. A 19in rack mount or table top mixer it is also powered by Stealth Digital Processing and floating point Super FPGA technology and because of its size is highly portable.

Consoles are not just made in Britain, of course. Germany's Stagetec (8.C80) will feature its On Air flex at IBC, a broadcast mixing console that uses web technologies such as JavaScript and WebKit (plus a web server) for its virtual interface, allowing operation and configuration from any network capable device. It works with Stagetec's Nexus modular routing platform.

On the same stand, sister company Salzbrenner will show the Polaris, which offers up to 512 free eligible channels per DSP frame and touchscreen. It also makes use of Nexus.

Lawo (8.B50) is promising something special for IBC. All we know for now is that "this addition to the product family boasts high performance and a new face, with an advanced feature set based on proven Lawo technology". In an unapologetic show of confidence, Lawo describes it as "simply unbelievable".

Also on show will be the established mc²56 and the mc²66 audio mixing consoles in different frame sizes. Both include the advanced AutoMix, the feature used during the FIFA World Cup in Brazil to enable the production of 32 feeds from just two operators.

Wohler will show its flagship AMP2-E16V modular audio and video processing monitor

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Monitoring and Measuring

A host of new monitoring options are going to be prevalent at IBC this year thanks in no small part to IP networking developments, file-based programme delivery requirements and the continuing quest for loudness control.

Wohler (10.B10) will have its flagship AMP2-E16V modular audio and video processing monitor on show. Features include simultaneous multi-format monitoring, quick program selection, instant stereo downmix, loudness monitoring, internal channel mixing (including SDI re-embedding), and audio delays.

With networked facilities and broadcast operations in mind, a new AVB Monitoring Option card will also be on show that allows AVB (Audio-Video Bridging) channels to be mixed, level-adjusted, and monitored alongside AES, SDI, analogue, and other input types, and in the same fashion.

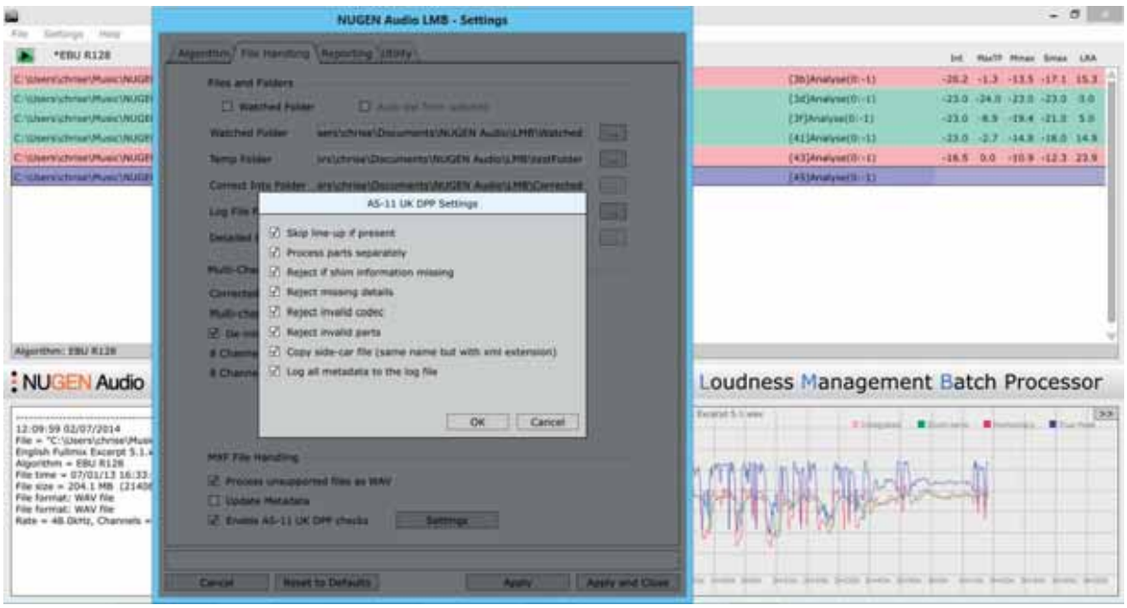
A set of MPEG DVB-ASI and IPTV monitors will make their debut at IBC too. These decode and then provide at-a-glance monitoring of programme content from MPEG-2/4 ASI and Ethernet IP streams, as well as 3G/HD-SDI inputs.

With the continued clamour for remote working, a software-based monitoring platform called iON may also be worth a look. This innovation gives users the ability to access, control, and manage a broad range of signals and associated data remotely from any web-enabled computer, mobile or tablet, with video and audio content streamed in real time.

TSL Products (10.B41) will present several European product launches that address the increasing demand for workflows based on audio and/or video-over-IP. The PAM AVB range – for monitoring connections based on Audio-Video Bridging as well as SDI, AES, and analogue audio formats – and the AXIUS range of managed Ethernet switches will both be on show. As will the PAM PiCo Touch audio, loudness, and logging meter.

"As the adoption of audio and video-over-IP continues to grow apace, we are excited to bring products to market that will help our customers to make the transition with tools that they know they can trust," says managing director Chris Exelby.

Of course it is difficult to go to IBC these days without getting involved in at least one discussion about loudness (even if it's just bemoaning the racket being made by the stand demos in Halls 7 and 8).



New from Nugen is DPP AS-11 programme compatibility for LMB

Nugen Audio (8.A76) is billing itself as the "go-to company for loudness management and compliance", according to founder and creative director Jon Schorah. And it's being done with at least one eye on October, the month in which television programme delivery in the UK will move from tape to file-based, as set by the DPP (Digital Production Partnership).

New from Nugen for 2014 is DPP AS-11 programme compatibility for LMB, the offline file-based loudness analysis and correction technology. A native MXF file-handling option now enables LMB to perform automated analysis and correction of audio within an MXF container while preserving all other data within the file.

Nugen will also showcase version 1.1 of MultiMonitor, the company's loudness and true-peak monitoring software application. The new version includes network meter reset options and a "tall" meter configuration.

On that same theme, DK-Technologies (8.E60) is offering an upgrade for its DK T7 audio, loudness and logging meter that includes loudness automation.

Available free-of-charge to both existing and future DK T7 users, it is based on SMPTE timecode and allows the DK T7 to instantly recalculate the integrated loudness value up to a four-hour period. Audio engineers could save lots of time with this as it means they no longer have to re-run programme material to hit their loudness target value.

Intercom and Talkback

Intercom and talkback is big business as the wireless and IP evolution continues.

At IBC2014 Riedel (10.A31) will introduce Tango, what it describes as "an entirely new intercom solution". As *Audio Media* went to press, details were still being finalised, but expect a big splash at the show.

Something we do have details of is a completely redesigned virtual control panel from Trilogy (10.A29). Now available for PCs, laptops, phones, and tablets in either wired or wireless configurations, it allows more people than ever to be part of a comms network or, as the company puts it, 'join the conversation'.

IBC will also be the venue for a demo of L-S-B's Virtual Studio Manager working in conjunction with Gemini, Trilogy's distributed matrix intercom. This has come about thanks to the implementation of the Ember+ protocol. The lower-end Messenger matrix-based intercom will also be on show.

Clear-Com (10.D29) will have a new version of its 1.9GHz roaming digital wireless intercom system FreeSpeak at IBC. Version 2 is an "enhanced DECT-based offering that operates in multiple licence-free DECT bands from 1.897-1.933GHz".

Available as an integrated or standalone technology, FreeSpeak II allows more people, using wireless beltpacks, to roam across a production area at the same time.

When using the base station, 20 full-duplex wireless beltpacks can be connected while, in a matrix setup, connection to 50 full-duplex wireless beltpacks is possible by placing 10 or more distributed remote antennas together to create an expansive coverage zone.

Clear-Com director of product management Simon Browne says: "The introduction of the redesigned FreeSpeak II Beltpack and Antenna provides rugged and ergonomic operation, together with greatly improved radio and audio clarity."

Networking, Routing, and Convertors

When it comes to linking things together, the Riedel stand is a good starting point.

"We are continuing to develop next-generation solutions that leverage the power and convenience of our networked approach to signal transport and routing, and look forward to launching a few of these at IBC," says chief executive Thomas Riedel.

MediorNet 2.0 will be one focus. This is a firmware update for the real-time signal routing and distribution network that provides video router functionality, high-speed re-routing and WAN capabilities.

Supporting FEC (Forward Error Correction), retransmission management and dynamic bit rate management, the Code One Transport Protocol used by MediorNet H.264 encoders and decoders ensures that the public internet can be used for point-to-point transmission of audio and video.

Riedel will also show MediorNet MetroN, a 2RU large-scale core router that provides a real-time routing capacity of 64 x 10G ports. MediorNet

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MetroN can function within a larger MediorNet installation, interfacing with other MediorNet frames via fibre.

There will be plenty more networked offerings at IBC, including those provided by Merging Technologies (8.E96). The Swiss firm is using IBC to display its full range of networked products, many of which are built around its MassCore Audio Engine.

Included will be the Ravenna/AES67 networked converters and CoreAudio and ASIO drivers that allow control from any workstation.

The Iris Networked Post Production System will also be on show coupled with Pyramix and VCube as a "complete solution".

Clear-Com will have a new version of its 1.9GHz roaming digital wireless intercom system FreeSpeak at IBC

Studio Recording

Prism Sound (8.E34) is giving European debuts to two new audio interfaces at IBC.

Titan and Atlas are multichannel devices that offer analogue and digital I/O for Mac or Windows PC at sample rates of up to 192kHz via a USB interface. Both units also feature the new MDIO interface expansion slot that can be used, for example, to add a direct connection to an Avid Pro Tools HDX system.

Titan has four microphone inputs, while Atlas has eight, and both are designed for multi-track recording, making use of Prism Sound's CleverClox clocking technology.

Prism Sound will also be showing an update to its SADiE 6 recording and editing software that includes options for engineers who want to work with Broadcast WAV (BWF) files that incorporate ISRC data. The ISRC in BWF feature is included in SADiE's WAV Master option and is in the SADIE version 6.1 update as part of the 'Mastering Suite' and 'Sound Suite' packs.

Dynamics processing company Jünger Audio (10.A49) will show its D*AP4 VAP Voice Processor. Designed to make life easier for TV production voice-over studios and feature film ADR facilities, it features a proprietary Spectral Signature dynamic EQ, a tool that provides automatic and dynamic EQ control in order to balance spectral differences in real-time.

A nifty little innovation, it works by analysing incoming audio and comparing its spectrum with individually predetermined voice 'fingerprints' in order to automatically apply dynamic EQ corrections and provide a consistent sound.

It could prove to be very handy on a voice over or ADR session that takes place over several days or any other scenario where tonal inconsistencies in a voice recording could occur.

Still on the subject of dialogue, Nugen Audio will present a software application with an algorithm that adapts the dynamic content of audio appropriately for different listening environments and playout systems, while respecting the level of dialogue in the original mix and meeting specific loudness criteria. DynApt will be useful for things like bringing theatrical releases to TV or making TV content suitable for mobile streaming.

The first implementation of this new technology is now available as an extension for Nugen Audio's LMB offline loudness correction system.

Microphones

Although several of the microphone manufacturers that *Audio Media* contacted were keeping their IBC cards close to their chests, there are some interesting titbits to reveal.

DPA Microphones (8.D70) for one has come up with a neat way to give control of mic placement to non-technical actors or reality show contestants but still get decent quality sound.

The d:screet omnidirectional miniature necklace microphone houses a 4061 miniature capsule inside a soft rubber necklace. So, in theory, anyone can put it on.

"These microphones are perfect for situations where fast costume changes are necessary – or for reality TV shows where the contestants have to place microphones without help from a trained audio engineer," says DPA chief executive Christian Poulsen.

"The necklace design ensures that the microphone sits in exactly the same place on the body every time, so there is no need for EQ-ing between different recordings."

Sony, the company with the biggest presence at most IBCs, is using the show to talk about how its audio technology fits into different workflows. The DWX digital wireless microphone series is one example after it was chosen by Scottish TV as part of a newsgathering investment in XDCAM and digital audio.

"Sony is pushing the boundaries of audio quality, striving to provide a natural sound in challenging conditions," explains James Leach, the company's European marketing manager.

"This has been seen most recently on Joss Stone's world tour, as the UWP-D wireless microphone series has been helping to capture Joss's journey as she performs in every country around the world. At IBC2014, we will be showcasing our audio solutions as part of the wide offering of broadcast and workflow technologies that Sony offers." ■

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The d:screet omnidirectional miniature necklace microphone from DPA

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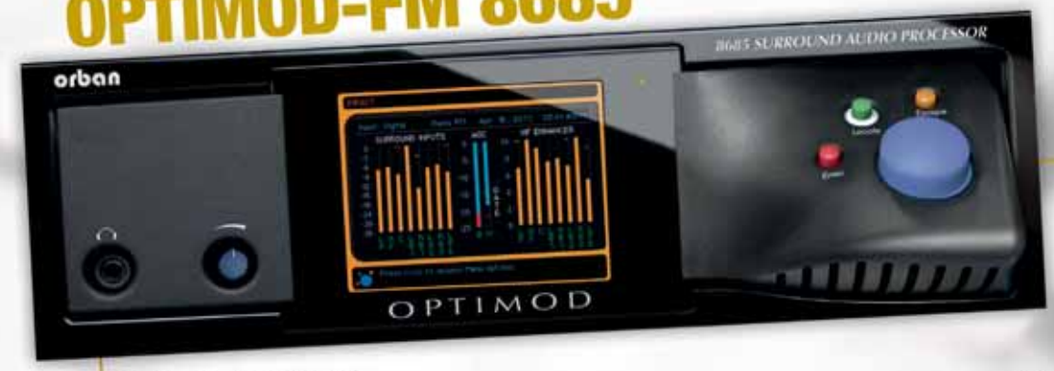

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An eye on IBC

A host of new products look set to make their debut in the halls of the RAI. We take at look at what to keep an eye out for and offer some tips on making the most of your trip to Amsterdam.

EVO.Live, Fairlight's new generation digital audio mixing system, will make its European debut at IBC2014. Based on Fairlight's audio processing and control surface technologies, EVO. Live offers integrated HD video and multitrack audio recording. A key feature of the console is its ability to switch between live and post-production modes at the touch of a button so that staff engineers can use the desk for audio sweetening when it isn't needed for on-air applications.

Fairlight's CTO Tino Fibaek says: "By combining live and post-production capabilities in a single console, we have succeeded in delivering a product that is more flexible and more cost effective than any other large-format live broadcast console on the market. EVO.Live customers will get a much better return on their investment because they are effectively getting two consoles in one."

HHB and audio post subsidiary Scrub will be joined by co-exhibitors TC Electronic, Dynaudio, Mogami, and Roland. Loudness experts TC Electronic will be launching several new additions to its production and broadcast product ranges.

SSL will highlight new features for MADI-Bridge, its MADI to Dante IP audio network interface

With the DPP (Digital Production Partnership) file-based delivery target of 1 October imminent, compliance with the EBU R128 loudness standard is a hot topic for IBC visitors, and HHB will be exhibiting the latest loudness metering and correction technologies in hardware and software for acquisition, production, and transmission.

RTW will bring its latest crop of loudness metering solutions to IBC2014. Launched earlier this year, RTW's Masterclass PlugIns Loudness Tools software and TM3-Primus will be on display for IBC attendees for the first time. In addition, executives will be on hand to discuss the company's new software, smart and premium product categories as well as additional solutions that RTW is planning to reveal during the show.

Says Andreas Tweitmann, managing director, RTW: "Digital content production is at an all-time high, putting audio needs in the spotlight. IBC is a wonderful platform to share our latest innovations with professionals seeking relevant solutions for their evolving needs. We welcome meeting with attendees and the open exchange of ideas that this show offers."

SSL will announce the release of new features for MADI-Bridge, the company's MADI to Dante IP audio network interface. Part of SSL's Network I/O range, MADI-Bridge is the industry's first fully broadcast-ready interface between MADI and Dante.

The new features for the MADI-Bridge include bidirectional Sample Rate Conversion and a powerful new 'Split Mode'.

MADI-Bridge' provides an interface between a Dante IP Audio Network and MADI. With 64 channels per Bridge at 48kHz, or 32 channels at 96kHz, redundant MADI, IP Network ports and PSU, the Bridge is built for uninterrupted fully-redundant operation.

We ask: What tip(s) would you give to people attending their first IBC?

"Take time to visit all the exhibitors in your main focus hall (so for us post production Hall 7), you never know what exciting complementary services to your business there are available."
Carrie Russell head of R&D, channel strategy, Audio Network

"Wear some comfortable shoes, pace yourself, the days are long and the evenings out can be even longer!"
Nicki Fisher sales director – EMEA, Clear-Com

"Don't try to do it all in a day. I mistakenly booked a same day return flight on my first visit to the show and was astonished at how big it was. Just getting around audio Hall 8 can take a few days, so build enough time in to see it all. Oh, and bring some comfortable shoes!"
Andrew Low marketing co-ordinator, HHB Communications

"Wait until Sunday to turn up as then you can get a better deal on hotels."
Lars-Olof Janflod marketing & PR director, Genelec

We ask: What's your least favourite thing about IBC?

"It is difficult as an exhibitor to be able to get to see everything you want, as IBC is a busy show and it is difficult to leave the stand. IBC's success hinders us from getting around to see the technological advances, although this isn't really a complaint but a compliment!"
Ian Cookson communications manager, Calrec

"Maybe not with IBC only but with most broadcast shows being so incredibly video centric and that audio is the poor cousin in the back seat."
Lars-Olof Janflod marketing & PR director, Genelec

"The overcrowded city of Amsterdam if all exhibitors and visitors of IBC are in town. Overpriced hotels. Expensive but less good restaurants. Waiting for cabs. Many other cities in Europe would be more exciting and could do it better."
Peter Pörs managing director, Jünger Audio

"The fact that IBC runs over a weekend. When it gets to Sunday afternoon I always feel like shouting out "Go home to your families all of you! Why are we working all weekend – even on a Sunday afternoon when there is no real need for any of us to do this". As you might guess I would far prefer the more conventional Monday or Tuesday – Thursday show days (like NAB)."
Thomas Dove director, Vidcheck

"I think that the audio part of IBC has become less important which I think is a shame as it is as much a part of a good broadcast experience as anything else."
Anne Berggrein marketing manager, DPA Microphones

Fairlight's EVOLive will make its European debut at IBC

Also on show will be the C100 HD PLUS and C10 HD PLUS digital broadcast consoles. The new C100 HD PLUS large-format broadcast console is designed to offer a complete production solution for news and sports in a single, standard, high-power configuration, while the new C10 HD PLUS is an 'out of the box' powerful compact digital broadcast console. With frame sizes from 16 to 48 faders, the self-contained fanless console can be built into vans for ENG operations, specified for network-scale sports productions or positioned for all-round production demands in mid-scale broadcast facilities.

Sommer Cable will highlight its products in the field of connectors, cables and signal management. Of particular interest is the Glandmaster splice adapter, which is suitable for voltage distributors of three-phase supply lines to single-phase loads, for a flexible speaker signal management with a maximum of eight loudspeaker channels or for splicing up all kinds of hybrid lines (fibre optical, HD-SDI, signal, power).

We ask: What are you most looking forward to about this year's show?

"Almost everything. Although it seems strange to many, I love tradeshows and look forward to them with great excitement and expectation. We work really hard to make them a success and it is great to meet all kinds of people there, new and old – customers, friends, and competitors, and yes, I do often even have a beer with competitors. There is also always something new to think about or learn."
Raphael Samad business development director, Emotion Systems

"Two things. IBC always generates solid business for Nugen Audio. It's a very exciting point in the year where we consolidate existing plans and embark upon new relationships, which have often led to entirely new business opportunities we would not have encountered had we not attended the show. The other is new ideas. There is always something at the show I have never come across before, and I am careful to leave at least a few hours open every year just to "walk the floors" and see what's new."
Jon Schorah director, Nugen Audio

For the latest news from the show floor visit www.audiomedia.com

PLAN YOUR VISIT

In addition to the product launches going on around the showfloor, IBC2014 will also host an extensive seminar and training programme. We pick some of the highlights.

Avid Connect Europe

11 September

9:00-11:30

At NAB in April, Avid rolled out the first set of products that lie at the heart of its Avid Everywhere strategy to connect creative professionals and media organisations in more powerful, efficient, collaborative, and profitable ways.

Specifically, the company introduced the Avid MediaCentral Platform and a series of modular application suites. It also outlined plans to introduce new marketplaces to help ITS customers, partners, and anyone in the industry participate on the platform. At IBC, Avid will update its customers on the momentum its seen from the April announcements and present the next set of Avid Everywhere product and service innovations that continue to push the vision forward for its customers.

Avid is making these announcements directly to its customers as part of Avid Connect Europe, the first European gathering of the Avid Customer Association (ACA). Taking place at the Hotel Okura on 11 September, Avid Connect Europe will bring together ACA leaders and members to hold the next set of in-person meetings it started at the flagship Avid Connect event in Las Vegas last April. Register for Avid Connect Europe at: **www.avidcustomerassociation.com**

12 September

08:00-9:20

Advances in 3D audio – latest RD

This session explores the latest technologies emerging from the research labs and standards bodies regarding the capture, delivery, and reproduction of audio in three dimensions.

Chaired by Lidwine Hô, head of innovation and binaural audio at francetélévisions, the panel will look in some detail at the features of the new MPEG-H 3D standard which not only provides 3D immersive audio but introduces the concept of audio objects and flexible speaker layout. This will be followed by an exploration of a new generation in personalised audio: a system which uses interactive control to tailor ambience and effects, and includes the ability to render a range of playback conditions including the 'overhead surround' dimension.

This session will reveal the secrets involved in the virtual placement of sound sources anywhere in three-dimensional space, including behind, above, or below the listener.

16:00-17:30

The 2020TV experience and how to get there

A group of leading executives from across the broadcasting spectrum give attendees a peek at their five-year roadmaps to assess which game-changing technologies and consumer behaviours they believe will forge our 2020TV landscape.

18:00-18:30

Keynote: The challenges ahead

Neelie Kroes, European Commission vice president with responsibility for the Digital Agenda for Europe (DAE), sets out the challenges ahead as she sees them. She will explain how she assesses the phenomenon of convergence between audiovisual and broadband, and the policy implications that it might have.

13 September

18:30-21:00

IBC Big Screen Saturday Night Movie

In a world-first, IBC delegates will be able to watch *Life of Pi* in 14 fl 3D Christie 6p laser projection and Dolby Atmos in the Auditorium.

14 September

10:00-11:00

Keynote: Television's expanding universe

Multiple award-winning broadcaster Brian Cox will be giving his thoughts on the physics of television and how TV is evolving. Will we one day be watching Brian in 3D holographic form in our living rooms? This keynote promises to be a lively and entertaining session.

15 September

08:00-09:30

EBU loudness breakfast

Loudness metering, normalisation, and mixing has become one of the most important and debated topics in broadcast and other areas, such as music, cinema, and streaming today. This session will focus on facts, technology and standards – not on products. It will look at the successes and failures of the 'Loudness' Regulations in broadcasting and other markets. The session will be rounded off by a worldview panel discussion and Q&A managed by ORF/PLOUD chairman Florian Camerer.

11:30-13:00

Immersive audio – from the big screen to the small screen

Attendees will hear from leading technology providers such as Auro Technologies, Barco, Dolby, and DTS about their solutions for cinema, broadcast, home cinema, and mobile. We will also discuss the industry endeavour to provide meaningful interoperability and standardisation. There will be demonstrations using the IBC2014 Big Screen Experience immersive audio system from Dolby Atmos.

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Composer Jason Graves in his studio

Sample Supremacy?

With sample libraries becoming more and more realistic and budgets getting squeezed ever tighter, the average composer must be relying more on in-the-box options than John Williams-esque orchestras, right? Jerry Ibbotson finds out.

You're slumped on the sofa watching the latest, "Mate, you've got to see this…" drama that you know will consume an obscene amount of your time. Or you're plugged into a game that got 11 out of 10 stars on that review site you like.

The music's great – a rousing orchestral score than really adds to the whole performance. But surely it's all samples these days, isn't it? Technology, costs of an orchestra, and all that?

Not so, according to TV and film composer Nainite Desai. "The danger of using samples is that it requires a lot of time when trying to either inject that human emotive touch into the music or when creating a distinctive score that stands out from the crowd. To counter this I almost always bring in at least a couple of live players."

Film and TV composer Miguel d'Oliveira, whose work can regularly be heard on BBC dramas and documentaries, does dip into sample libraries but will always go with the live approach if possible.

"Whenever I can, I go for a live ensemble. Nothing replaces its sound. You may even get stuff that you didn't write (which may sound better) and samples don't tend to do that. If I start by picking up a guitar, a trumpet, a mandolin, etc. I know that samples, if anything, will come at the end just for a dash of colour. My libraries are an amalgamation of the ones I have been creating for projects I've worked on, and purchased bits from 8dio, Soundiron, Project SAM, VSL, SonicCouture, Cinesamples, etc."

Finding your Path

James Hannigan, who composes for broadcast media and games such as *Transformers Universe*, likes to pick an approach and stick to it.

"I try to be consistent with the production method of every cue, as it bugs me sometimes hearing scores that are a patchwork of different approaches. You can sometimes hear how certain cues have been prioritised, and it becomes evident decisions are being made in relation to budget that are having an impact on the realisation of the music.

"Low budgets can be a reality, but I think it's partly up to composers to disguise those realities, or render them irrelevant. For example, if I find that I can't use a real orchestra for a project, I'll probably avoid trying to 'fake it' and will steer clear of anything resembling a big orchestra, but may use individual instruments or sections at times.

"My use of sample libraries tends to be for mocking up an orchestra or some other ensemble before actually recording the real thing, which makes them incredibly useful."

Jason Graves, a composer with an impressive track record in game music, uses orchestral samples of mock-ups on every project to give the end client something tangible to listen to. He then re-records around half of that material with a live orchestra. And even when he does use samples, he goes for a grow-your-own approach.

"I've been building up my own orchestral library. What started as textures and effects has grown to an extensive list of articulations covering the entire orchestra – lots of very deep sampling of individual instruments, so I have complete control over each wind instrument and the individual string sections. This takes a lot of dedication – it's been five years in the making – but it's paying off for me. Last year's score for *Tomb Raider* was entirely my personal sample library, plus me performing various solo instruments around the studio. When I do need non-orchestral sounds that I can't record myself my first stop is Heavyocity. They have the most inventive and best-sounding virtual instruments out there."

Custom Work

Recording-your-own-samples is something that resonates with Ian Livingstone, who counts diverse examples such as *Rome: Total War 2* and the *Great British Sewing Bee* among his recent work.

"I've got most of the major orchestral libraries, for example SAM, 8dio, Eastwest, VSL, etc, but I also developed a custom orchestral library with some friends, which we recorded in Utah and edited and programmed ourselves. Although it's quite old now

there's still a few sounds and tricks in there which haven't made it into commercial libraries yet. I also use a lot of commercial loops, breaks, and phrases but I always prefer to choose instruments which give you the flexibility of mangling and doing something unique with the source material – Spectrasonics pioneered this with its SAGE engine but it seems to be a growing trend that other developers are offering a lot of these features."

Desai took a similar approach when working on three new BBC series: "I used samples to write beds of music just as a guide. The musicians are then playing on top of the music sometimes replacing the guide sampled melodies or adding layers and textures to the musical beds. I then edit/cut up all the playing afterwards as a kind of customised sound library and create a bespoke library of riffs that can be used. So alongside the samples I am using live players and I play a lot of instruments myself."

Money Matters

Christian Henson, who's recently finished working on *Alien Isolation* for Sega and the movie *Robot Overlords*, says it depends on the budget: "Samples are usually in there somewhere with my main focus always being on using live players. So for bigger pictures I'll use them to mock up and maybe bolster the final mixes with the live instruments in the forefront. For the kind of medium stuff I'll use them to correct mistakes when we haven't had enough time to record, and maybe (in the case of *Poirot*) help shifts to larger apertures for the odd big cue.

"So I'll use a chamber band for 70% of the score, then I'll have to bring in a purely 'symphonic' element on top of the chamber band for more cinematic cues. For low-budget stuff, I'll largely use samples but with a few cherry-picked soloists. As for libraries, I only use Spitfire products. As they are all recorded in the same room they all fit together. Other than that I make my own."

Being Flexible

You might think that using a library would make life easier from the angle of flexibility: when creating new elements to match a change in the brief or just an upping in the action.

Henson disagrees: "One must simply adapt one's craft to work with the materials we are either given or give ourselves. For every project I create a different set of rules that I must live by. By purposefully limiting one's resources, one becomes more resourceful. So on *Robot Overlords* we purposefully went in and recorded the orchestra too early. This meant we had to work with the audio to hit the lock and with this extra time using Pro Tools and audio not Logic and MIDI I was able to do some very different stuff. I look forward to people hearing it!"

But for Desai, it's the polar opposite. For her, only samples can keep pace with rapid changes in content. "You have to be very fluid when writing to picture – being able to make constant changes and re-edits to new versions of the film to very tight deadlines especially at the end of the edit process," she explains. "I recently completed *The Day Kennedy Died* a major doc for ITV/Smithsonian. It had wall-to-wall music (around 80 mins) all written to picture during the seven-week edit.

"I was writing 4-6 minutes of music a day, sending it to the edit. They would then edit with the music, send a shortened new edit back to me, and then I would re-edit and re-work the music to fit the new edit. As the music was heavily synchronised around the dialogue and many visual hit points, working with samples made things very flexible. Using live musicians for the whole score would have been hard to work with."

Graves says you can be adaptable, whichever route you go down: "Samples are obviously a lot more flexible in terms of making last-minute changes, but I've been known to be pretty dangerous with some discrete orchestral stems and an audio editor. I think most occasions defer to samples because of budget, obviously. A proper orchestral recording will easily double the music budget.

"Too many think of computers as crutches we depend on to make things easier and faster. But to me, computers and samples libraries are simply another tool to utilise when necessary, just like a particular ribbon microphone or a specific Les Paul guitar. When I do need non-orchestral sounds that I can't record myself, my first stop is Heavyocity."

Television and film composer Nainita Desai

Hannigan says there's a danger in using samples when working on an initial mock-up. "In having to create a good mockup for approval, there's a danger of 'composing for sample libraries' to best exploit them, losing sight of the orchestra and its unique capabilities," he says. "Ask yourself, for example, would the sheer musicality and richness of, say, a John Williams orchestration be present if he had to mock up his music before having it approved? I suspect not, because he is a master working directly with the orchestra, which is an art in itself. A second pitfall is the emerging need to have a live performance closely resemble an earlier mockup – which, again, means that the composer may only go into territory with sample libraries they know they can faithfully reproduce."

"Computers and samples libraries are simply another tool to utilise when necessary, just like a particular ribbon microphone or a specific Les Paul guitar." Jason Graves

The flip side of this, he believes, is that the unique properties of a sample library might be under-used. Take movie trailer music for example. "The goal there isn't necessarily to emulate an orchestra, but often to simply use an 'orchestral palette' of sorts, and to tap into a specific musical language and form we've become familiar with in that context," explains Hannigan. "You might even call it a hyper-orchestra (if you want 36 French horns, why not?) And some of that music is so huge, tight, and mechanical (not to mention heavily processed) it isn't even playable by real people anyway – but that doesn't mean it isn't valid in its own right."

And the future? Henson paints a picture with a gloomy edge to it. "For music? Good. With the democratisation of technology the best composers will be able to make great sounding work. For the industry? Bad. The technology behind the delivery of IP changes radically every 3-5 years. You therefore cannot legislate quickly enough for these delivery methods in order to monetise them effectively.

"Composers are having to take on more and more work to make ends meet; the quality is dropping; and consumers are becoming normalised to this. The net result is that our profession is becoming de-professionalised and that will have a direct effect on the quality of our music culture."

Hannigan thinks it's time for the samples vs. real debate to be over: "For me at least, sample libraries are simply another weapon in the composer's arsenal, finding their own domain to operate in and new applications all the time. As to whether they will ultimately replace the need for live musicians or not, I just don't know, but I hope not because I see libraries and musicians as complementary rather than mutually exclusive or in conflict. Both have huge value to composers, but nothing for me can really replace the unique, personal, and 'once only' performance you will get out of a real human being in the studio." ■

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The purpose-built control room

CHALE ABBEY STUDIOS

Sea Change

Just two hours from London via boat or hovercraft, UK festival island the Isle of Wight has added a new studio to its thriving music scene. By Jake Young.

Located at the southern tip of the Isle of Wight is Chale Abbey Studios, one of the best-equipped recording spaces south of London. Nestled on the downs just two minutes from the coast, this residential facility, which was only completed in summer 2013, has already recorded a number of projects including Michael Kiwanuka's new album and Bernhoft's album *Islander*.

The studio is built around the live room, a stone barn that dates back to the 1500s. "When we initially saw the barn, as a working farm building, we were blown away with the natural acoustics and feel of the space," says recording engineer David Granshaw.

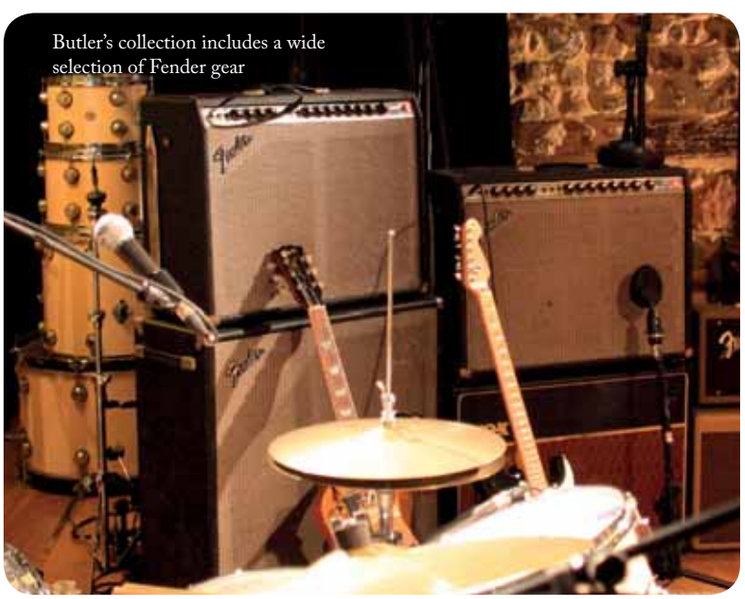
A decision was made to keep as many of the original features as possible including the oak trusses and stone walls. "The old stone walls provide brilliant diffusion, there's such a nice ambience." A solid oak floor has been added to enhance the acoustics, along with a new upgraded roof.

"I love the ambient miking," adds resident producer Paul Butler; also of Isle of Wight and Brighton band The Bees, "having the option of doing a tambourine take 10 metres away from the microphone so you can layer up a wall of sound in essence. You can use the whole space and we do it all the time and it's beautiful. You don't have to EQ or effect anything and it can just sit at the back of the mix because it is naturally recorded at the back of the mix. It's amazing. Same with backing vocals or effects, big stomps on the floor or something like that just to have that big impact."

Heavy wool serge curtains allow a range of acoustic options. In addition, acoustic panels up in the eaves have tamed some of the low frequencies. A moveable booth option is being considered, though at the moment Taytrix gobos in combination with rugs are used to enclose the drums and amps for a tighter sound.

Adjacent to the live room are the fully isolated control room and a smaller live room, both designed from the ground up by White Mark.

Granshaw: "This room has been working really well for vocals and upright piano. It's very useful as a contrast to the big room and allows us to record live with complete separation. We also occasionally use the hallways and cupboards for guitar amps, or the Leslie cabinet."



Butler's collection includes a wide selection of Fender gear

The control room, which has soffit-mounted ATC SCM150 ASL main monitors and Adam Audio S3-A nearfields, is centred around an SSL 4000G+ console. Butler adds: "This board is a beautiful thing to have in the studio for both mixing and for all its routing options, and it's just a nice thing to sit at." Large windows to both live rooms allow for good communication, as well as letting in plenty of natural light.

The studio has an eclectic range of outboard from Universal Audio, Thermionic Culture, Focusrite, Emperical Labs, and E.A.R. The

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Campaign Manager: Warren Kelly
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Pro Tools HDX system also features a large number of plug-ins from Sonnox, Waves, Altiverb, and UAD.

As well as the natural live room chamber, reverb options at the studio include an EMT 240 gold foil plate, Bricasti M7, and a Space Echo RE-201. Two other interesting elements that the studio is going to develop are a World War II bomb shelter and underground concrete tanks, which will be used as echo chambers. "The bomb shelter is built into a hill on the property so it has great isolation. It also sounds mad and wonderful so we thought it'd be great fun to stick a mic and a speaker in there and experiment!" adds Granshaw.

Nice and close

Butler was set on going anywhere in the world to get a residency in a big place, and then Chale Abbey Studios turned up five minutes down the road. His Ventnor-based The Steam Rooms studio was a "semi-smelly basement", and he missed working in big places. Butler: "I'd like to record with space from now on. I'm going to have my own little mix room at home, but as far as recording a band goes, I like space, so this place works great."

Butler has built-up a collection of instruments playing with The Bees, a whole load of which are at Chale Abbey Studios. Between Butler and the studio, Chale Abbey Studios is full of interesting toys. Granshaw: "As well as the Bechstein grand and upright pianos, we've got a wide range of vintage instruments including a Hammond L100 with Leslie 145, a Fender Rhodes, and a Philicorder. We've also got an old '69 Rogers kit and he's got a nice '60's Ludwig, they're interchangeable."

Butler also has lots of "really cool, old, wonky sounding stuff", and loads of Fender silverface gear including a whole range of Twins, Bassman heads, and different sized cabs. "That coupled with our backline of new and old amps and drums gives us lots of options."

The mic cupboard is already well stocked with several Coles 4038s, Neumann U87s, Neumann KM 184s a Soundelux E251, a vintage AKG D25, and STC ball and biscuit to name a few. "We are always on the lookout for nice vintage mics. You can't have enough and they provide such a natural EQ." ■

www.chaleabbeystudios.com

Michael Kiwanuka Chooses Chale Abbey Studios

Producer Paul Butler discusses the Chale Abbey Studios sessions of Michael Kiwanuka's new album.

You produced Michael's first album in your home studio. What are the benefits of Chale Abbey Studios for this one?

Michael's really much stronger as an artist. He's got a brilliant live set going on with good friends so he's got four or five amazing musicians around him. This studio's perfect for it. We need the space now. It's amazing to have those brilliant drummers and brilliant bass players and guitarists. They all play everything, incredibly talented people. At the moment the studio looks very tidy but once Michael's here with all his toys there's not a square inch of space in the big room. Space for toys really, that's the big benefit. The big feature of the second album is just to have everything here. It's been going really well. We're already 12 or 14 tracks in. We rushed up to nine tracks in a two-week session, just because Michael's performance is now so strong.

(L-R) Pete Randall, David Granshaw, and Michael Kiwanuka
Credit: Samuel John Butt
www.samueljohnbutt.com

What's the big difference?

If he's sitting at the piano or sitting with a guitar the big difference is that we can use the sound of the room, we can have a nice microphone almost a metre away from him, and with the volume dynamics that he's singing with it seems to work a treat. It's a lot of tweaking on the vocal chain but it's a beautiful thing when you get that balance between the instrument and the vocals just on one microphone. He feels very comfortable with that because there are no headphones involved and he can just give a full performance, as long as the other musicians in the room are playing quietly, which suits me fine. That's the vibe of this next album and it's going really well. It's exciting.

What have you gone for on this one instrument-wise?

The addition of a guitar called the Fender Bass VI, which is a normal guitar setup but an octave lower. It's not like a dangerous six string bass. It's just these beautiful chords, these incredibly low resonant chords. It's like this absolute experiment in what bass tones you can get away with. We've been layering up double basses and this Fender Bass VI. Michael's concept with the second album that we talked about at the beginning was "it's going to be a lot darker with a little ray of light in the middle of each song, which kind of accentuates that light bit in the middle". I think we've been nailing it. It's just that element of a bit of voodoo in there. It's a lot darker but everyone's really getting into the performances.

Were there any songs that burst into action?

I think we went for it on the first nine songs because there were nine good ones in there, had a bit of breathing space, then came back to them. There's going to be a lot of orchestral arrangements. We've got the space for it now, even though all we've done is got Andy Parkin, who did all the strings on the first album, back in. It's a sound that Michael's really happy with as well. I'd be happy if there were a handful of string players that we could overlay but it's almost a bit more spooky just having Andy. It seems to work really well. That's all to come on Michael's album and that will finish it off I think. The album will probably be finished by October or November so no mixing will be happening until next year.

What was the vocal chain?

We keep trying to beat my CMV 563 with a little mod and we can't. It's just singing at the moment. When it's not crackling we do the 563 usually from a reasonable distance, so there's some good space around it. Normally I'd go for the Germanium preamps in my old Swedish console. At the moment however, the Summit Audio is the pre that we're quite happy with, just because it breaks up so well, and then it goes off into the EARs. It's either the EAR 822Q, which is beautiful, or we use just one channel of the EAR 825Q, the mastering one, going into one of the EAR 660s. And that's the chain pretty much on every vocal take so far.

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Expert Witness

Do you need a control surface? Nick Mitchell knows the solution you require.

Everything in a DAW we know can be taken care of by mouse and keyboard commands, but are we missing something by not having that tactile fader while mixing, those shuttle wheels when editing, or solo switches when tracking?

Prolonged DAW users fight the threat of carpal tunnel syndrome and while not suggesting a controller will solve that on its own, it does invite a varied way of working. Whether to a traditionalist who grew up on mixing consoles, or to those who have never used a desk but feel they want more of a hands-on approach to software manipulation, this is a modern dilemma, whether you're in the box or using a hybrid system.

We don't always think about it, but with mouse and keyboard control we tend to only tweak one thing at a time, whereas with control surfaces, complex multi functions can be carried out at the same time. The daily use of smartphones has made us all a little more tactile in our ways.

So I guess the question is, what will a controller do for your workflow?

Control surfaces come in a variety of sizes, and while I'm going to focus on a few units in order of price that are dedicated mix controllers, often you can combine an existing keyboard controller or dedicated programming pad surface to work with a DAW for mixing. These allow you to travel with portable writing rigs, or add another level of manipulation to a setup.

Many products by Akai, M-Audio, Novation through to Native Instruments Maschine, Ableton's Push, Nektar (with vast knob controllers and motorised fader), and Softube's Console 1 all do a variety of DAW/plug-in manipulation. As they work as MIDI controllers they are more than capable of mix control, if a little time is spent mapping your desired controls correctly for your needs.

Small format

If portability or space is an issue you can't get much smaller than the PreSonus FaderPort. Designed with one fader but with transport control, automation control, Pan, Mute and Solo, this is a USB connected device which runs under HUI or Native mode and works with all the main DAWs. It's great for laptop users who like to travel light but miss the touch of a fader.

One of the first small-format controllers released in a 1998 partnership with Digidesign (now Avid) was the Mackie HUI (Human User Interface) to work with Pro Tools 4.1 at that time. This developed a protocol called HUI, which has been adopted by most control surface manufacturers and DAWs, enabling multi-compatibility between devices.

HUI is behind the Mackie Control Universal Pro and Mackie Control Extender Pro. Originally developed in partnership, in a previous version, with Logic it works with all the main DAWs with overlays for key commands and V-Pot control.

They consist of two units, a main base unit with eight motorised faders, V-Pots and transport control, and an expander with eight faders and V-Pots. Both units connect via MIDI over USB and can be expanded to run up to three expanders off the main unit (a MIDI interface is required if you wish to run more than three expanders).

> 'The daily use of smartphones has made us all a little more tactile in our ways.' Nick Mitchell

When Euphonix was acquired by Avid, its control surfaces were given a facelift to adopt everything new about the updated Pro Tools software and the Euphonix EUCON software.

Allowing better DAW integration via Ethernet for Logic Pro, Cubase, Nuendo, Digital Performer, and Final Cut Pro this provides much faster resolution than MIDI, while allowing you to control multiple applications and DAWs, enabling multi-switching in use from the one controller.

There are three control surfaces in the series. Artist Mix offers eight touch-sensitive faders and eight rotary encoders, and transport control. Artist Control has four faders and a touchscreen that is programmable for any EUCON-enabled device. Finally Artist Transport has a large shuttle wheel and soft keys to trigger shortcuts or key commands within your software of choice. Mixing and matching Avid Artist Series units appeals to those who want flexibility and the need to switch between a variety of software applications on the same machine.

Physical changes

The idea that a control surface has to be made with physical faders was blown wide open when Slate Pro Audio released its original large Raven MTX controller. This has spawned a smaller sibling in the 27in Raven MTi. With the new V2.0 software now available there's no better time to get to grips (literally) with a six-touch multi-touch display HD controller that connects via USB 2.0 and DVI.

The MTi allows you to carry out multi functions like you would on a traditional control surface. Where the power lies is in the V2 software, which allows for custom macro commands, and quick-keys that enable one-touch control to carry out multi functions, saving vast amounts of time. Slate has also invested many hours in creating macro commands for the post and music industries, so while you can create your own, you may never need to.

SSL designed the Nucleus with some features taken from its SSL Matrix to provide a complete recording solution. Consisting of 16 faders, assignable soft keys and V-Pots, it also includes two SSL SuperAnalogue mic preamps. Connecting to your DAW is via Ethernet and it has a built-in USB audio interface, with the flexibility to switch between three connected DAWs with customisable control and key mapping.

Nick Mitchell

The feel of the Nucleus has been designed for serious real-world usage, with chunky transport controls, jog wheel, and high-quality motorised faders. It also has monitoring and headphone outputs, so it works as a complete package should you require it or as a very well laid out controller.

SmartAV has developed its own ARC Technology and has now released MonARC software, which is a scrolling-based channel overview to run on its touchscreens. Combining a 22in touchscreen and hardware motorised faders, pots, shuttle wheel, soft keys, and OLED displays on all programmable buttons, the connection is via Ethernet, and currently supports nearly all the major DAWs. A Tango V2 will be available shortly complete with an appearance upgrade, as well as some additional functionality. It is ideal for the user who wants the best of both worlds between touchscreen and hardware control.

It's worth mentioning there are larger format controllers such as the SSL Matrix, which has 40 inputs, fully featured monitoring, and 16+1 faders, and the larger customisable Avid S6.

So really whatever your budget and workflow, getting hands-on has never been easier… why not try it? ■

Expert witness

Nick Mitchell
is a KMR Audio product consultant and freelance engineer and producer. All the products mentioned are available for demonstration through **www.kmraudio.com** with showrooms in north London, Richmond, and Berlin.

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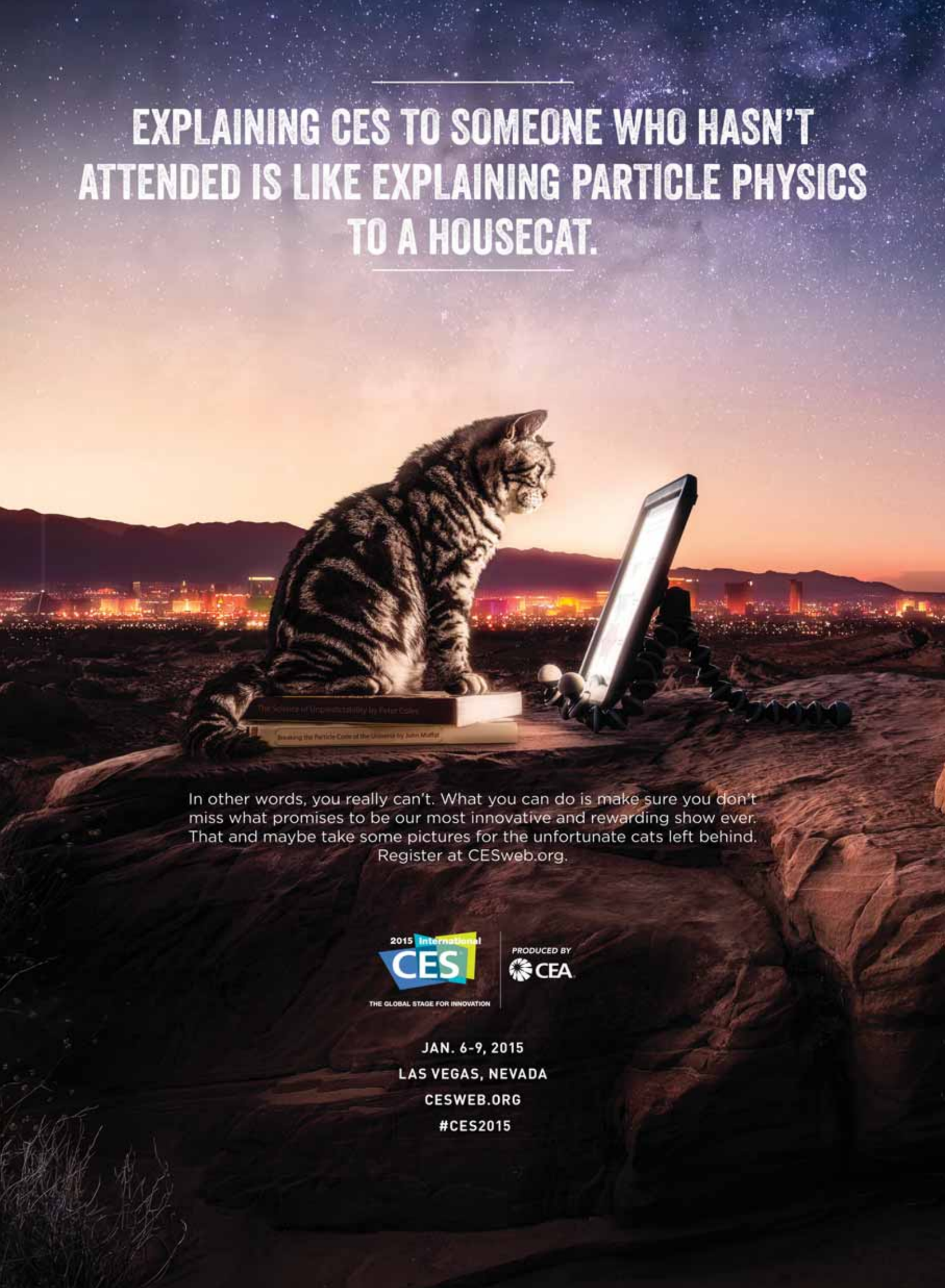

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DAWs

While the market for DAWs has seemingly matured in the past few years there is still a steady stream of new releases and updates. Choosing the right tools for your workflow and style is at the core of the recording process.

ABLETON
LIVE 9 SUITE

Ableton Live 9 Suite is described as the ultimate package for creative music production and performance. It includes the full range of Ableton software instruments and effects, many additional sound libraries, and Max for Live.

- Multitrack audio recording at up to 32-bit/192kH
- Powerful and creative MIDI sequencing of software and hardware instruments
- Advanced warping and real-time time-stretching
- Unlimited number of audio and MIDI tracks per song
- Includes 10 software instruments, 41 effects, and Max for Live
- Includes 23 sound libraries (Packs) with over 50GB of original sounds

www.ableton.com

ADOBE
AUDITION

Audition is Adobe's powerful waveform editor and multitrack DAW, designed for professional broadcasters and video editors. Create, mix, or repair any project with clarity and rich features.

- Multichannel waveform and spectral frequency editing tools
- Over 50 native plug-ins, as well as VST and AudioUnit support
- Use it alongside Premiere Pro or any NLE via OMF or Final Cut XML
- Get hands on with Avid Artist and Mackie control surfaces
- Comprehensive file format and metadata support

www.adobe.com

CAKEWALK
SONAR X3 PRODUCER

SONAR X3 Producer Edit lets users correct vocals with Melodyne Essential. It is also possible to create realistic and authentic drums sounds with the full version of XLN Audio Addictive Drums. Get that pro sound with the ProChannel – now with the QuadCurve EQ Zoom and analyser for added precision.

- Unlimited audio and MIDI tracks
- Move seamlessly across all production tasks with Skylight Interface
- Full support for VST3 synths and effects
- Record and mix with the end-to-end 64-bit double precision engine
- Play and record with 23 instruments including Rapture and Dimension Pro
- Custom touch support on touch-enabled devices running Windows 8

www.cakewalk.com

APPLE
LOGIC PRO X

Logic Pro X is the most advanced version of Logic Pro to date, with a new interface designed for pros, powerful creative tools for musicians, and an expanded collection of instruments and effects.

- Drummer, which provides a virtual session player that automatically plays along with your song
- Flex Pitch, which provides integrated pitch editing for audio recordings
- Logic Remote, an innovative new way to play and control Logic Pro X from an iPad
- Track Stacks lets users organise and collapse multiple tracks into one, or can be used to create rich, layered instruments
- The Arpeggiator is one of nine new MIDI plug-ins and can transform a simple keyboard chord into an elaborate performance

www.apple.com

BITWIG
BITWIG STUDIO

Bitwig Studio's unified mapping system allows users to modulate any device or VST parameter using macro controls and modulator devices. New creative possibilities include audio and note expressions, histogram-based value editing, layered editing, extensive bounce-in-place functions, automatic slicing, smart controller integration, and the Open Controller Scripting API. Every feature in Bitwig Studio was developed by musicians, for musicians.

- Record and arrange, improvise and perform, or do it all at once
- Choose between several display profiles
- Design your own sounds with dedicated container devices
- Combine built-in instruments, effects, and VST plug-ins

www.bitwig.com

AVID
PRO TOOLS 11

Avid Pro Tools 11 enables professional music and audio production for today's workflows, from all-new audio and video engines and turbocharged 64-bit performance, to expanded metering and new HD video workflows.

- Fully redesigned audio engine and 64-bit architecture
- Expanded metering including extended standards support and gain reduction
- Direct HD video workflows with the built-in Avid Video Engine
- Ultra-low latency with a dedicated input buffer
- Faster-than-real-time offline bounce for quick delivery

www.avid.com

twotwo™

reference monitoring all ways

twotwo.8 - Dec'13

Editor's Choice MusicTech

twotwo.6 - Dec'13

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ATL™

Advanced Transmission Line

Analogue & Digital up to 192kHz

The **twotwo** series active monitors make choosing and using a reference monitor easy. Plug in some audio, and you're good to go, be it analogue or digital, in stereo or surround, on phonos or XLRs; all A/D or sample-rate conversion is taken care of on board. Whether you're driving the **twotwo**s digitally from a console in a world-class studio, or plugging them into a laptop via a phono lead in a hotel room, you can work smarter and faster with the sonic transparency and accuracy that has made PMC speakers the reference monitors of choice amongst the world's audio elite.

All models produce an expansive sound, their compact dimensions belying their impressive extended low-frequency performance, wide dispersion and stable, accurate imaging. Powerful onboard DSP optimises the response of the drivers, guaranteeing a flawless crossover, and the unique built-in dual-amplification system produces high-resolution audio with unparalleled headroom and detail. The **twotwo** series has been carefully designed for use vertically or horizontally, without affecting tonal quality, stereo or surround imaging; so with the **twotwo**, the only way is both.

T +44 (0) 870 4441044

E pro@pmc-speakers.com

PMC®

www.pmc-speakers.com

TRAKTION

TRAKTION 5

Tracktion 5 music recording software was launched in January 2014 and updated to V5.3 in May. The software is designed to enable rapid capture and manipulation of musical ideas and eliminates barriers to the creative flow as it solves a number of problems that have long plagued the multi-track recording process. For instance, the need to create sub-mixes in order to free up resources for additional tracks is now eliminated by T5's Edit Clip format.

- System Resource Manager and 'Freeze Point' technology
- Greatly enhanced set of MIDI capabilities
- New Step Sequencer Clip can be viewed and edited in the timeline
- New plug-in browser located on the main (Edit) page sidebar

www.tracktion.com

PRISM SOUND/SADIE

SADIE 6

The latest upgrade to Prism Sound/SADiE's SADiE 6 software is said to deliver great benefits to the mastering community thanks to the inclusion of a new toolset for today's 'digital download' age. New features include Wav Master, which allows users to create WAV files for an entire album using PQ marks to define the start and end of the WAV file for each album track. Track Titles, Artist Name, and other information is automatically incorporated into these files.

- Fast workflow-based operation tailored for speed and precision
- Available as software only, DSP hardware or native turnkeys
- Provides a complete and comprehensive toolset for multiple applications included within the single software package (no need for additional programs)
- Enhanced set of mastering tools including new Wav Master and ISRC in WAV functionality
- Sample accurate editing and processing with SADiE and iZotope plug-ins as standard

www.sadie.com

PRESONUS

STUDIO ONE

Studio One Professional 2 is packed with powerful professional editing features, including integrated Melodyne pitch correction, yet it lets users work quickly and easily, without wading through menus. Load and save audio clips, MIDI files, effects, and VIs by drag-and-drop and take advantage of multitrack comping, multitrack MIDI editing, and transient detection and editing with groove extraction. Mix, master, burn CDs and DVDs, upload to the web, and market and sell music via Nimbit, all within Studio One.

- Powerful drag-and-drop functionality
- Content browser with search, convenient sort options, and preview player
- Integrated Melodyne Essentials pitch correction
- Integrated mastering suite with automatic mix updating, CD burning, digital release, SoundCloud client, and Nimbit upload
- Multitrack comping and transient detection and editing with groove extraction

www.presonus.com

MERGING

PYRAMIX 9

Pyramix 9 is professional audio workstation software, designed to be the ultimate tool for the post-production, music production, mastering, and ultra-high resolution audio industries. Pyramix offers stability, power, and flexibility.

- MassCore Engine providing 768 I/O at 1.3ms latencies
- Sampling rate support up to 384kHz DXD/DSD256
- Native Ravenna/AES67 support
- Completely render-less workflows
- The most transparent I/O hardware on the market
- Edit, mix, master while in record

www.merging.com

STEINBERG

NUENDO 6.5

Nuendo 6.5 is the latest point update offering new features and enhancements dedicated to post-production workflows, such as loudness processing, bass frequency management, and voice/Foley recordings.

- Automated loudness processing to industry standards and user-definable settings
- Professional bass management including several routing and filter options
- ADR Taker 2.0 for voice/Foley recordings
- TrackVersions for creating, renaming, and managing parallel versions of the same track
- Track visibility management expedites handling of large projects

www.steinberg.net

SONY CREATIVE SOFTWARE

SOUND FORGE 2

Sound Forge 2 is designed for recording, editing, processing, and rendering high-resolution, broadcast-quality audio master files. Gain fast access to an easy audio recording process, deep editing tools, 64-bit AU and VST plug-in compatibility with automation, and the audio hardware routing functionality that Sound Forge users expect.

- Record – up to 32 simultaneous channels at 24-bit/192kHz resolution
- Edit – configurable viewing panels allow users to toggle to any project view in seconds
- Process – includes Wave Hammer compression, a Sound Forge classic, retooled for OS X
- Render – save audio files in a wide variety of popular formats

www.sonycreativesoftware.com

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Legendary analogue sound on your desktop.

Record with stunning 24/192 kHz conversion

Get the best dynamic range and clarity of any desktop interface. Digitally controlled analogue monitor outputs provide full resolution at all listening levels.

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Explore the character and colour of classic mic preamp designs with integrated Unison mic preamp modelling.

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Get blazing fast PCIe speed and rock-solid performance on compatible Macs.

uaudio.com/twin

*Apollo Twin includes the "Realtime Analogue Classics" UAD plug-in bundle. All other plug-ins are sold separately at www.uaudio.com. All trademarks are property of their respective owners. Requires Mac OS X 10.8 Mountain Lion or 10.9 Mavericks. Thunderbolt™ cable sold separately.

UNIVERSAL AUDIO

SOURCE

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DAW Controllers

With each new release digital audio workstations become more powerful, intuitive, and creative. A DAW controller might be just what you need to bring processes, sounds, and techniques.

ABLETON
PUSH

Ableton Push is the instrument for hands-on control of melody and harmony, beats, sounds, and song structure in Ableton Live.

- 64 velocity and pressure-sensitive multi-coloured pads to play and sequence beats
- New way to play notes and chords. Play melody and harmony in any key
- Improvise and play with loops. Trigger and rearrange ideas at any tempo
- Eleven touch-sensitive encoders

- Includes Ableton Live 9 Intro and works with any edition of Ableton Live 9
- Designed by Ableton, engineered by Akai Professional

www.ableton.com

ALLEN & HEATH
GS-R24

GS-R24 combines refined analogue quality with a choice of analogue or Firewire/ADAT interface modules and MIDI control for a digital audio workstation or recording device. Designed to sit at the heart of a busy project studio, GS-R24 has the flexibility and audio quality to enhance the impact of recordings, whatever the workflow.

- 24 mic/line plus two dual stereo inputs channels, and two additional valve inputs
- Choice of analogue or Firewire/ADAT interface modules
- Six auxes, four subgroups, Main Stereo + Mono bus
- 100mm faders, available in motorised and non-motorised versions
- MIDI control and 5.1 surround monitoring

www.allen-heath.com

BEHRINGER
X-TOUCH

The Behringer X-TOUCH gives users all the tools needed to streamline workflow, and get the very best out of recording and mixing sessions. Nine fully-automated, touch-sensitive motorised faders, eight rotary encoders with LED collars, dedicated transport controls, and 92 illuminated key function buttons mean it is possible to take full control of your DAW. Connectivity is flexible for both USB and MIDI, plus the X-TOUCH features an Ethernet port for network applications.

- Supports HUI and Mackie Control protocols for integration with compatible DAWs
- Nine fully automated, touch-sensitive 100mm motorised faders
- Eight dynamic LCD Scribble Strips for track names and parameters
- Ethernet interface for RTP (Real-Time Protocol) MIDI and future X32 remote control
- Eight rotary controls with LED-collars for on-the-fly parameter adjustments
- 92 dedicated illuminated buttons for direct access of key functions
- Built-in 2x2 USB/MIDI interface for Mac or PC computers and an external MIDI device

www.behringer.com

SOFTUBE
CONSOLE 1

Not a DAW controller per se, but rather a standalone mixer that builds on an integrated hardware/software solution. Console 1 offers hands-on control of an entire mix, as well as Softube's model of the classic mixer Solid State Logic SL 4000 E – officially endorsed by SSL.

- Integrated hardware/software mixer
- Solid State Logic SL 4000 E model included
- Analogue sound and hands-on workflow
- Use with any major DAW

www.softube.com

FAIRLIGHT
XYNERGI

Designed to meet the needs of the professional media editing market, Xynergi harnesses all the power of Fairlight's integrated hardware and software to deliver a powerful, intuitive media production system. Incorporating Fairlight's patented self-labelling key switches, Xynergi packs plenty of functionality into a compact controller and gives engineers the tools they need to capture audio, manipulate individual tracks, add effects' mix to multiple formats, and simultaneously edit audio and video.

- Fast editing with purpose-designed tactile controller
- Macros and scripting for easy programming of repetitive tasks
- Complete support for complex, integrated, networked workflows
- Independently scalable components so users can build a system to suit their application
- Supports complex multi-format deliverables, extensive video playback support, and industry standard plug-ins

www.fairlight.com.au

YAMAHA

NUAGE

Nuage marries Yamaha hardware with Steinberg's Nuendo 6 DAW software to produce a modular audio recording and editing system. Nuage's modular design means highly customised systems can be built to satisfy any requirement, system components communicating with each other (and up to three DAWs) via Dante networking, the digital network ensuring that premium audio quality is maintained throughout. Although aimed principally at post production, Nuage is suitable for all audio recording studios.

- Nuage Fader control surfaces
- A Nuage Master control unit
- Nuage Workspace units
- Three Nuage I/O units
- A PCIe Dante Accelerator card

www.yamahaproaudio.com

NOVATION

LAUNCH CONTROL XL

Designed to help Ableton users focus more on their music and less on their laptop screens, Novation's new Launch Control XL provides hands-on control over everything in Live. Its 24 knobs are laid out in three rows of eight, just like Ableton's mixer interface. Along with the 16 multi-coloured buttons and eight chunky faders, all the controls integrate seamlessly with Live from the very start, yet are entirely re-assignable to any other parameter.

- Create your own control layouts by freely assigning any control to any function in Ableton
- Enhance your live performance by combining with Launchpad S
- Get precise control over your levels with eight rugged faders
- Plug straight into Mac, PC, or iPad and start performing
- 16 multi-colour buttons for immediate track focus and key mixer controls
- Includes Ableton Live Lite software and Loopmasters sample collection
- Control all MIDI-compatible iOS software via Camera Connection Kit

www.novationmusic.com

PRESONUS

FADERPORT

The FaderPort connects via USB and provides a touch-sensitive, motorised, 100mm Alps fader for writing fades and automation in real time. It also controls your DAW's recording transport, solo, window selection, and much more.

- Touch-sensitive, 100mm long-throw, motorised Alps fader
- Complete recording-transport controls
- Record Enable, Pan, Mute, Solo, and Undo/Redo controls
- Write single-channel or grouped-channel volume, mute, and pan automation
- Connects via USB 1.1
- Compatible with all major recording software for Mac and Windows

www.presonus.com

SSL

NUCLEUS

Nucleus redefines the professional project studio with a blend of advanced DAW control, transparent SuperAnalogue monitoring, high-class analogue mic pres, pro-quality USB audio interface, and bundled SSL Duende Native plug-ins.

- Ethernet connected DAW controller that switches between three connected DAWs with a single button press
- Benchmark SuperAnalogue output to separate +4dBu and -10dBV connections with zero latency monitoring with wet/dry control to balance input and DAW playback
- High-quality USB audio interface and Digital S/PDIF I/O
- Two combi XLR mic/line/instrument level inputs to audio interface and monitor outputs
- SSL SuperAnalogue mic pres, identical to those used on SSL Duality and AWS consoles with 80Hz high pass filters, phase reverse, and phantom power
- Insert send/return connections switched between inputs and DAW playback for mixdown plus additional 'external' SuperAnalogue input monitor path for another audio interface
- Two headphone outputs, iJack monitor input and standard 0.25in jack footswitch, and four USB sockets for use as a four-port USB hub

www.solid-state-logic.com

MACKIE

MACKIE CONTROL UNIVERSAL PRO

The Mackie Control Universal Pro control surface gives you nine motorised, touch-sensitive Penny + Giles faders, eight V-Pots, and more than 50 master buttons. The MCU Pro delivers precise control, makes setup easy – no mapping required – and enables users to see their mix in action with real-time visual feedback via the backlit LCD and eight LED rings.

- 100mm touch-sensitive Alps motorised faders
- V-Pot control over software, plug-in effects, and virtual instruments
- Full meter display with track names and parameters
- Onboard USB MIDI interface
- DAW-specific Lexan overlays included
- Expandable via optional Mackie Control Extender Pro module(s)

www.polaraudio.co.uk

BM Compact mkIII

SMALL-FORMAT NEAR-FIELD MONITOR

Something is rocking in the state of Denmark, writes Alistair McGhee.

Of course when Shakespeare wrote words similar to that all those years ago he was probably thinking of *The Killing* and Sofie Grabol's fine knitwear collection, and who can blame him? But maybe the Bard had something more rock and roll in mind.

I love a small monitor, I have Harbeth's LS3/5As, Spendor's 3/5se and most of my daily listening is done on Tannoy Reveals – all small boxes with two drive units. So Dynaudio's new BM Compact mkIII fit right in at McGhee towers. Except, Dynaudio sent them along with its BM9S II sub. Now I've never been a fan of subs really, if I wanted John Entwistle to live behind the couch, well I would have arranged the room differently. More of the BM9S II later.

The BM Compact mkIIIs are teeny tiny, just under 7in across and 10in high. They're active with balanced and unbalanced inputs and some tweakery available on switches for high pass, low, mid, and high frequency adjustments. You don't get a volume control but you do get a three position switch offering +4, 0 and -10dB. I parked this at -10 to give me more subtlety on the volume control. After all Mr Marenius paid a fortune for the P and G volume control on his kick ass DAC-S2, or at least that's what he told me. I wanted him to get his money's worth and also using the Swedish Marenius kit kept it Scandinavian driving the Dynaudios.

Sitting on top of my workstation, flanking the monitors, mic amps, and interfaces and with the sub central under the rest, I probably had the BM Compacts pretty close to their natural environment. One very nice touch is that Dynaudio includes a pair of IsoAcoustic stands which will lift your monitors 3in or so off desk height and put the tweeters that bit closer to earline.

In Use

I was lucky enough to have about three weeks with the Dynaudios and I have to admit I enjoyed them immensely. Sitting as I do in the nearish field the limitations of small speakers in terms of absolute levels and the ability to fill big spaces with bass are not such a problem. The Dynaudios are aiming to be a working tool, monitors for production rather then speakers for casual listening. And as monitors I appreciated their strengths. Having left foobar2000 running I suddenly found myself listening to *'A' Bomb in Wardour Street*. The space around the kit leaps out of the sound stage, guitar and vocals punch through the mix, laden with artistic aggression, the sound is never tiring or shouting. And this despite the obvious fact that deep bass is limited from such a small cabinet. Nice job Dynaudio.

One of the Compact's best features is their transient ability, if you put real smack on tape (careful now) then you'll hear it in playback, edges are crisp and this lends to the sense of overall accuracy. And to achieve this without hyping the top end is a nice piece of engineering, too often gains in transient performance come at the expense of neutrality. One other very attractive aspect of the Dynaudios is the ability to do quiet while at the same time doing loud. If you are trying to mix with dynamic subtlety you need monitors that don't mask the depth of your mix while still maintaining the scale of your peaks. The Compact monitors pull this off in a very convincing way. In my medium-sized room loudness was not a problem, the Dynaudios were comfortably loud enough.

Subs In

So what are the down sides? Well small monitors can sometimes feel congested when large-scale reproduction is required and here the Dynaudios are only human. I will say that with the Dynaudios I would always check it wasn't just a congested mix. They mostly speak truth. Secondly there's the question of bass. Physically you need more driver real estate to get low bass. Now, I am probably the world's least bothered by bass person. It's not that I don't care about the bottom couple of octave it's just that I feel more sensitive to problems in the midband and at the top end. However closely attentive readers will have noticed that Dynaudio has thoughtfully provided me with a BM9S II which can only be described as a subwoofer.

Dynaudio's sub has flexible set up options, XLRs in and out for routing your stereo signal through the sub. There is a master gain control, a

"If you are trying to mix with dynamic subtlety you need monitors that don't mask the depth of your mix while still maintaining the scale of your peaks. The Compact monitors pull this off in a very convincing way."
Alistair McGhee

Audio Media managing editor Joanne Ruddock speaks to Dynaudio Professional global business manager Fred Speckeen about the design considerations behind the mkIII.

What were the most important considerations when designing the BM Compact mkIII?
The most important consideration in designing the BM Compact mkIII was to address the needs of those working in small recording environments where they are space-constrained to using a small footprint for the monitor yet their ability to mix accurately, with excellent translation, and enjoyably would be in the performance found in larger format monitors that they simply don't have the space for. This is a contemporary challenge shared by project studios through to video editing suites and broadcasters the world over.

Dynaudio focused on providing the highest monitor performance that it could provide in this the smallest of monitors. You'll find, for example, that the BM Compact mkIII provides higher SPL and extraordinary bass extension in comparison to similar sized monitors from other manufacturers at all price points. We also considered that the placement of the monitor in a small desktop recording situation was also problematic – isolation and placement options are limited and make a world of difference – we did our research and chose what we could hear were the best choice: IsoAcoustics isolation stands. We then formed a strategic alliance with IsoAcoustics so that we could include one of these stands with each near field monitor so that the best possible customer experience would occur right out of the box. I think we succeeded as we are getting tremendous response to this product.

How does this generation differ from the mkII what's new?
BM Compact mkIII has a new, smaller voice-coil LF driver that originated in the Dynaudio Professional Air 25 then was further refined in the Dynaudio Evidence series (high-end residential). The objective was to provide superior sound in a small driver. Transient response and bass extension are made possible due to the use of modern materials. The smaller voice coil balances the ratio of dust cap to cone in this small driver, resulting in even greater mid-range clarity than before.

BM5 mkIII and BM Compact mkIII both have new Class D amplifiers in place of the prior Class A/B amps. This gave us much more flexibility when voicing the products for the small studio environment and gave us even better FR and SPL while also reducing power consumption and weight. Both products also support unbalanced RCA inputs for flexibility on the desktop.

BM6 mkIII and BM12 mkIII were upgraded to having the newer design Dynaudio Pro Waveguide and were also tweaked in the voicing process. The gentle increase in directivity of the HF was important to us as part of working to continuously improve the products.

What are some of the unit's key features that set it apart from the competition?
There are subjective conclusions and objective facts to share here! A few comments though...

Subjectively, all Dynaudio Professional products share a reputation for presenting a neutral, uncolored sound with a high level of mix detail in a way that is non-fatiguing. This is why they have been chosen by ear by the world's leading broadcasters and recording studios for decades. Since 2000, over 250,000 Dynaudio monitors have been sold to recording studios around the world. The BM mkIII line allows users to select consistent sounding monitors across a range of formats that suit nearfield desktop through to midfield large studio situations.

Objectively, driver design (LF and HF) is key to why Dynaudio products sound better. The addition of an IsoAcoustics stand with each monitor (ISO-L8R155 for Compact mkIII and 5 mkIII, and ISO-L8R200 for 6 mkIII and 12 mkIII) guarantees the best performance on first use.

As you can see by the comparisons, across this range you'll share extraordinary FR (especially bass extension) and high SPL that are typically unavailable in monitors of the same size even at higher prices. These specs don't tell how they sound, though. I hope you get a chance to spend time listening to them – especially the BM Compact mkIII.

continuous low pass filter from 50 to 150Hz, the ability to roll off the signal passed through to the monitors, a separate LFE in and out which can be used to drive a second slave sub, and a green power option. The BM9S II can sit in automatic mode listening across the input and will power down when it works out your neighbours have complained and you've gone to headphones.

I parked the sub under the workstation, fired it up and rolled through my mix list. What did I think? In short – pretty damn good. One of the main problems with subs, apart from exciting room modes you never knew you had, is teenage temptation. You can set the sub level wherever you want and the temptation is to set it somewhere between structural movement and bowel movement.

But once you've overcome such childish notions the extra low frequency extension is really nicely handled and integrates well with the BM Compact mkIIIs. I found them a compelling combination. Here is not the place to discuss the universality of a separate subwoofer but for me sitting close to the monitors with the sub central just seemed to work. You will get centralised low bass with this set up but not in a way I found distracting.

I think probably the compelling attraction of combining the two Dynaudio products is providing an upgrade path. I think the Dynaudios are a totally compelling small active monitor solution. Accurate and professional to the core. But what happens when the upgrade bug bites? Well the BM9S II provides the answer. You retain the virtues of the Compact monitors while adding the extra grunt down low. Sweets to the sweet, as the Bard might say.■

The Reviewer

Alistair Mcghee
began audio life in Hi-Fi before joining the BBC as an audio engineer. After 10 years in radio and TV, he moved to production. Most recently, Alistair was assistant editor, BBC Radio Wales and has been helping the UN with broadcast operations in Juba.

INFORMATION

Feature set
- Extended excursion 5.7in woofer with pure aluminium voice coil
- 50W LF and 50W HF RMS Class D amplifier with DSP crossover
- 116dB SPL peak power output
- Frequency response of 49Hz-24kHz
- Bundled with IsoAcoustics ISO-L8R155 speaker stand for decoupling and proper angling
- RRP: $629 (MAP)

www.dynaudioprofessional.com

RME Fireface 802

FIREWIRE AND USB AUDIO INTERFACE

Building on the success of the Fireface 800, this new unit offers enhanced features and connectivity, writes Simon Allen.

The Fireface 800 is responsible for growing much of RME's strong reputation in the audio devices market. With new technologies available today and many exciting developments in RME's newer line of products, it was time for the 800 to undergo a major update. Meet the all new Fireface 802.

RME's name was built by combining great functionality at competitive pricing, with high-quality sound. Typically, RME's products are affordable for serious amateurs, and yet of a high standard to cater for industry professionals, being developed by designers who are all musicians or sound engineers.

I imagine that nearly every engineer, and many musicians and producers, have found themselves working with a Fireface unit at some point over the past 10 years. I know I certainly have. The feature set they had in such a small footprint that also worked easily on a variety of systems, often made it a very easy choice when deciding which interface to use. However, with so many interfaces available today and systems becoming more versatile, what has RME put into the 802 to ensure it continues to hold its place in the market?

Channel Overview

There is a total of 30 input and 30 output channels combining analogue and digital connectivity. On the analogue side there are 12 in and 12 out, made up from eight balanced TRS line inputs and four mic preamps. The mic amps have balanced XLR/TRS combo sockets for instrument direct inputs. For the outputs, there are eight balanced TRS line outputs and two TRS stereo headphone outputs. These headphone outputs are high powered and suitable for high impedance headphones.

Although the total I/O count is only slightly higher than its predecessor, the emphasis is on higher quality. All the analogue circuitry is designed to have low noise-to-signal ratio and low distortion values. The converters behind, and in front, of the transparent analogue circuits are equally clear, as I find out later. These analogue I/O now boast 118dBA of dynamic range, including the headphone outputs. One feature from RME that I really like is the inclusion of their SteadyClock with jitter reduction, even when you are clocking from an external clock source.

On the digital side there are two simultaneous ADAT connections providing you with up to 16 in and out. With an additional couple of A-D/D-A units this could give you up to 28 analogue connections. The ADAT 2 connection will also support SPDIF for extra flexibility, while an AES/EBU, Word Clock, and MIDI connections are also on hand. The 802 will support sample rates of up to 192kHz.

Firewire and USB

The original Fireface 800 was geared around a Firewire 800 or 400 connection. However, more recent developments from RME such as the Fireface UC have proven the same level of performance and reliability from a USB2.0 connection, which RME now favours. Here with the 802, RME is offering all three for the simplest connectivity to modern computers that we've ever seen; USB2.0, FireWire 400 and 800. This is possible due to RME's own audio interface core rather than third-party audio technology.

The USB connectivity also permits the 802 to be used with an iPad. As well as an audio interface for the iPad, RME's new TotalMix FX software is available as an iOS app too. The TotalMix software is extremely powerful and beautifully presented, but often it is awkward to operate with a mouse while hopping between other applications such as DAWs.

> **"This is a brilliant product update with all the functionality we have come to expect from RME." Simon Allen**

Apart from the optional monitor controller described later, there is a TotalMix template for the iOS and Android app, 'TouchOSC'. This enables wireless remote control via an iPad or iPhone conveniently on a separate screen.

TotalMix FX

The 802 also comes with onboard processing power and the new TotalMix FX control application. Combined, these in essence provide low latency monitoring solutions with a surprising amount of control, flexibility, and processing power. As well as acting like a studio-style console for monitor management, the TotalMix FX software also controls the units settings such as clocking and sample rate, etc.

The TotalMix FX app is vastly improved from the old Fireface 800 TotalMix software. There is a new design that looks more up to date and is much easier to use without prior knowledge of its functions. The amount of new features within the app is very impressive; dedicated control room section, channel options for mono, stereo, M/S processing and phase, channel strip settings such as EQ and dynamics, a new matrix system, to mention just a few.

The number of possible routing scenarios is endless. Any of the 30 input channels and any of the 30 playback channels can be routed and mixed to any of the 30 output channels. To aid this, there are also 15 stereo sub-mixes available. To complete the modern digital console feel, channels each have EQ with filters and complete dynamics modules with reverbs and effects running on separate busses.

All this processing power means you can create very low latency monitoring mixes without concern of your recording software. The processing is handled by two onboard DSP chips, which manage the routing and effects processing respectively. The effects and signal processing will run at any sample rate by self managing its system resources, which RME calls automatic overload surveillance.

Optional Monitor Controller

Even though the TotalMix software is a huge development, both in terms of what it can do and the better user interface, you still have to work with the mouse, or of course on an iPad. If working within a DAW at the same time, RME's optional Advanced Remote Control (ARC) provides a simple tactile surface for quicker and easier workflow. There aren't many hardware controls on the 802 unit itself so the ARC is almost a must if you are going to purchase one of these units. With an ARC attached, the 802 can then be mounted into a rack and doesn't need to be at arm's reach for better studio integration.

The ARC provides anything from mono, dim, talkback, store, recall, and of course

volume. In fact any of its keys can be user programmed to operate a huge selection of the software features. The store and recall snapshot function inside TotalMix allows users through the ARC, to very quickly change between projects or system setups.

On the Road

One of the applications that most suits compact audio cards is location recording. So, for my test purposes I decided to use the 802 out on the road. This time it was a classical choir project in a location which sounded great for a medium-sized choir, but didn't have any recording equipment installed. Therefore all monitoring headphones, microphones, and the recording system had to be taken in and rigged on the morning of the session. The 802 was simply ideal. With an external preamp unit connected via optical ADAT for additional microphone inputs, the 802 had everything covered and was easy to setup.

The TotalMix software really is very easy to use and offered more functions than we could have ever needed on this session. It makes the whole unit simple and easy to use without any reference into a manual. It's also helpful when tracking something as sensitive as a classical choir, to have all the controls and metering on one screen. Best of all, however, was the ability to quickly create two different headphone mixes. Utilising the two independent headphone outputs on the front of the unit meant we didn't need an additional headphone amp.

As for the built-in preamps, they are excellent. Clearly a development over its predecessor the Fireface 800, the preamps are extremely clean and hardly add any coloration, which was ideal for this classical project. The gain structure was noticeably linear and easy to work with, unlike some other interfaces' built-in preamps.

For me, the biggest surprise was listening back to the audio in the studio afterwards. The additional preamps on the ADAT connection I have used many times before and feel I know how they perform with the same microphones. I've always been concerned about their A-D conversion yet with the RME there was a clear improvement. I can only assume that this was down to the SteadyClock inside the RME which I clocked from, and the jitter suppression technologies.

Conclusion

This is a brilliant product update with all the functionality we have come to expect from RME. Again the company has combined high-quality sound with the maximum specification at a competitive price. The 802 has found a gap of its own in an increasingly crowded market, and has done so in true RME colours. Onboard, low-latency DSP processing and the TotalMix FX controller app is an important development from RME, which has pushed the boundaries of what is possible from such a convenient unit. The materials that encase all these inner workings might not be scratch-proof, but at this price, the industry needs the 802 and I'd be happy to use one again soon. ■

The Reviewer

Simon Allen
is a freelance internationally recognised sound engineer and pro-audio professional with over a decade of experience. Working mostly in music, his reputation as a mix engineer continues to grow.

INFORMATION

Feature set

- Provides 60 channels of audio: 30 input and 30 output channels
- Ultra-low latency operation with USB or FireWire
- SteadyClock with jitter reduction
- Optional Class Compliant mode and operation with TotalMix FX for iPad
- RRP: £1,439 (inc VAT)

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Slate Raven 2.0

CONTROL SYSTEM FOR THE RAVEN SERIES OF CONSOLES

The software update has had Mike Aiton thumbing his thesaurus for superlatives.

Slate Media Technology has released an update for its Raven multi-touch virtual console. For those of you who have been behind a rock for the past nine months, the Raven is a multi-touch screen controller and virtual mixer, so far released for Pro Tools and for Logic, with other DAWs in development.

The team has been quietly rebuilding the foundations from the ground up for the 'all new' version 2 software and beyond, as in development they kept discovering better ways to implement all their exciting new ideas. I can only imagine how much fun the 'what if' meetings were.

Raven 2.0 now sports a batch command system – via a single button you can execute combinations of up to 1,000 key commands, mouse clicks, or menu selections. This is purpose-built bespoke integrated software. Slate has thoughtfully included a comprehensive set of pre-made commands that you will find very useful. This is not just a set of buttons so that you can activate Automation Preview, create a new playlist without reaching for your mouse, etc (although stuff like this is nicely included), but it goes way beyond and includes multi actions.

Slate resets the bar here and is going to turn your world upside down. An example of a multi-action would be to set up a headphone mix for a tracking session, where it would: create a stereo Aux, select a series of tracks, create a headphone send, copy the fader level to the send level – all with one button! Need to export your session to someone else who doesn't have Pro Tools? Hit one button and watch Pro Tools select each track and bounce to disk sequentially while you either regale the client with your "when I met Hendrix" stories or just show them the latest YouTube cat videos. The Raven does all the tedious work for you in the background. "Now that's what I call Cattitude"!

All the Batch Command buttons and layouts are freely customisable and you are able to program your own workflow time savers and put them on your own layouts. I can really see the opportunity for a healthy community of batch command and button layout sharing developing and thankfully Slate Media Technology has thoughtfully created a new Raven User Forum on its website. There is even a place to put photos of your studio set up.

While showing this software to James Ivey of Pro-Tools-Expert, it really struck me how different the worlds of music and post are, as we got excited about completely different batch commands and buttons. James was raving (sorry about the pun) about all the playlist short commands that would obviate the need for a mouse, whereas I was going misty eyed over the one button 'back and play' or 'view next' and 'view previous plugin'. There really is a wealth of great stuff here. Slate Media Technology has created a set of batch commands for General use, for Music and even or Post Production. Any user-designed batch commands get saved into a User section.

Other parts of the software update that may just escape your notice (due to the audio world's batch command feeding frenzy) are that the internal mixer (where the Raven mixer integrates itself graphically with the Pro Tools mixer) has a new way of working with Pro Tools 11. It now supports colours all the way down the channel, displays the Pro Tools dynamics and meters better and, best of all, supports mixed track widths so that post-production sessions with stereo, LCR, and 5.1 tracks can all intermingle happily. Great stuff – this really has made my day.

The faders algorithm has been even further improved with even better response and accuracy – why? Because they can! I have always loved the ability to go into fine fader mode and write minute fader moves with big sweeping gestures. 'Eat that' mechanical faders!

The toolbars have also had a quick juggle around and the floating window now includes some nifty buttons that change according to your layout. Another new feature most welcome is the two-finger navigation, both vertically and horizontally.

For me the only Achilles heel is the scrub implementation on the touch pad, but rest assured the development team are well across this and are beavering away.

Conclusion

We are all familiar with Steven Slate's desire to push the boundaries of the audio world and he shatters many myths and pre-conceptions in a very productive way, but by Jove I think he and his team, captained by Matt Dodge,

"Slate resets the bar here and is going to turn your world upside down." Mike Aiton

have trumped themselves here. Slate Media Technology has clearly defined that they are a company that for has vision and delivers that vision. For me, they have an Apple-like ability to make you enjoy what you are doing with their technology, and they have put the fun back in audio. If you never wanted a Slate Raven before, you should want one now after reading this. This is a product that not only is improving, but is redefining the way we work in audio. There is a new better in town and Slate's new marketing motto should be "Good, better, best... Slate."

Now have you seen the video where the cat…." ■

The Reviewer

Mike Aiton was weaned at the BBC. But after breaking free nearly 20 years ago and becoming one of London's busiest freelance dubbing mixers, he can mostly be found in his Twickenham dubbing suite, Mikerophonics. In his spare time he takes therapy for his poor jazz guitar playing and his addictions to skiing and Nikon lenses.

INFORMATION

Feature set

- Batch Command system can execute up to 1,000 key commands, mouse clicks and menu selections, automatically
- Powerful mixing with Faders 2.0
- Currently compatible with Avid Pro Tools and Apple Logic Pro, but will soon support Ableton LIVE, Steinberg Cubase & Nuendo, PreSonus Studio One, and MOTU Digital Performer
- Free software update for all Raven users

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SoundField SPS200

SURROUND SOUND MICROPHONE

Rob Tavaglione finds flexibility, portability, and great sound in this offering from TSL.

Multiple diaphragm surround-sound mics seem like such a luxury to engineers who work in stereo. There are numerous solutions and methodologies for capturing such immersive audio, but the microphone systems on the market are quite expensive and often bulky – and if not bulky, they at least have accompanying hardware for encoding, monitoring, etc. Worse yet, some solutions require users to commit to a surround format and hope that any needed fold-downs or re-formatting will be successful in post.

The SoundField SPS200 takes an entirely different approach.

Features

The mic itself is pretty simple and shockingly portable: four small-diaphragm condensers (the same as in other SoundField mic systems) in one chassis, in a tetrahedral arrangement, mounted on a single small body (no bigger than a C451 with multiple heads). Its proprietary cable fans out to four XLR outputs. The mic can be positioned endfire or side-address; then (remember how you pointed it) the accompanying Surround Zone software (TDM/RTAS, AU, VST) will encode your audio into the desired format (stereo, 5.1, 6.1, 7.1, etc) after the fact, in post. More than just encoding, numerous 'placement' functions are selectable: variable HPF, M/S encoding, swiveled left or right, tilted up or down, zoomed in or out, and widths of front and back are adjustable; as long as the mic is reasonably placed, numerous options abound.

In Use

I used the mic for some non-surround apps, like capturing an a capella gospel trio. I placed the 200 in the centre of the group, aimed upward (side-address), used four channels of super-well-matched Earthworks 1024 mic amps, and received great results. The frequency balance was desirably neutral – similar to a DPA or Schoeps mic array, not euphonic like Neumann or AKG. The cardioid patterns seemed sufficiently wide, with very nice imaging and a palpable sense of 'being there'. Without using the software, I panned and leveled using only common sense and received great results. OK, I did add a little chesty bottom end in the mix, and that really pleased the clients.

Next, it was time to really test this baby, so I called in local engineer Joe Miller for a second opinion. He used it to record orchestra with choir and praised the ease of set-up. Monitoring only in stereo on location, Miller wondered how his tracks might sound after decoding, but found the software to be indispensable.

"The microphone sounded great, but the software took it to the next level," he explained. "I can't imagine using a hardware decoder for this mic." Any worries I had about bottom end response were squelched, as the bass was extended, balanced, and more than ample.

Miller also captured the sounds of insects with the 200 and was even more impressed: "My tests were outdoors near a wooded area. After bringing it back to the studio and decoding, it was shocking how natural the surround presentation was relative to the natural environment. Plus, the random motion of sound within the field made for interesting playback in the studio: very lifelike, very cool. One caveat: this microphone eats wind [*Ed. note: As will any condenser in an outdoor environment*] and a blimp or dead cat windscreen would be mandatory, at least for me."

"The microphone sounded great, but the software took it to the next level."
Joe Miller

To My Ears

Any multichannel mic is only as good as its kit, and full kits are available with Rycote windshield and Pelican case for $3,800 (about $2,750 for mic and software only) and such a rig is a necessity for anything outdoors. That price point is nothing to sneeze at, but is more reasonable than first glance. "You really are buying four mics," Miller offered, highlighting the bottom line. Four mics, world-class sonics, and eminently flexible software, plus the deal-maker: If you've ever captured surround audio, you know 'placement regret' is possible and how fatal such errors can be. It seems to me the Surround Zone software is worth the price in peace of mind alone. ■

The Reviewer

Rob Tavaglione has owned and operated Catalyst Recording in Charlotte, North Carolina since 1995. Rob has also dabbled in nearly all forms of pro-audio work including mixing live and taped TV broadcasts (winning two regional Emmy Awards); mixing concert and club sound; and mixing and music supervising for indie films. He is a regular contributor to *Pro Audio Review*.
www.prosoundnetwork.com

INFORMATION

Feature set

- Surround mic that doesn't require an external hardware processor
- Includes processing software compatible with Pro Tools HD and all platforms supporting VST Multichannel
- Powered by standard 48V power
- A short break out cable outputs the signal at mic level on four balanced XLRs
- RRP: £1,750 (ex VAT)

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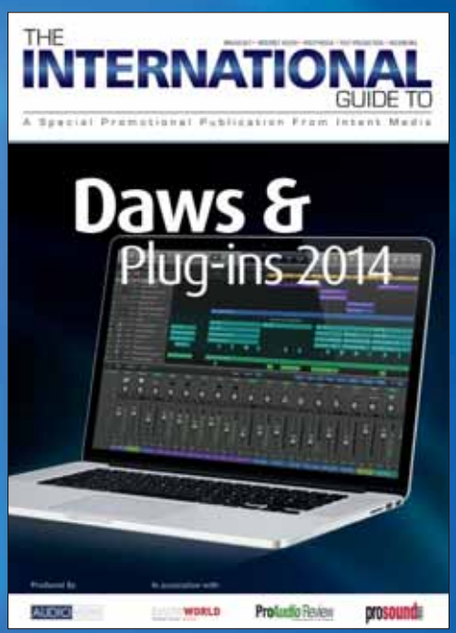

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Garry Schyman

John Broomhall talks to maestro Garry Schyman about his BAFTA-award-winning score for Irrational Games' epic title BioShock Infinite ahead of his appearance at this year's Game Music Connect in London.

Game Music Connect is returning to London's Southbank on 24 September backed by organisations including Sony PlayStation, Cool Music, Spitfire Audio, and Classic FM. This year, the game audio symposium event is also supported by the British Academy (BAFTA) – an appropriate development given it's an open secret the Academy's iconic gold mask is the most coveted of all European awards open to composers across the world.

Cut back to this year's glittering BAFTA awards ceremony at Tobacco Dock and amidst the critical acclaim that the dialogue, sound, and music of *BioShock Infinite* was already receiving, came the impressive double whammy of both a nomination for Audio Accomplishment, and a winning BAFTA for Garry Schyman's original music. Not bad by anyone's standards.

Talking to the Los Angeles-based composer, it quickly becomes apparent this was definitely a 'passion project', although the score's immensely positive reception was still somewhat unexpected…

The original BioShock music was very popular with fans and industry alike – what were your expectations for the reception of this sequel's score?

I'm really happy and a little surprised by just how well it's been received. Initially, I didn't think it would get as strong a reception as the original *Bioshock* score I wrote, but it's gotten as much, if not more attention, which I'm overjoyed about. It's interesting in some ways too, as although there's obviously some complex music in the game, there's also a lot of very simple, very tonal content.

And then to get awards for it and get honoured – it's just one of the best things. You know, obviously other creative professions have awards, but to be able to do something and work really hard – to be really passionate and pour your heart into it – go and record fine musicians (which I love doing) and all that stuff, doing all those things you love… and then to get rewards is wonderful. It's a hard business to be in – to be a composer – but when it all comes together, there's just nothing like it. I'm really blessed.

That the overall aural experience of BioShock Infinite is something of a tour de force is in no small measure due to a very distinct musical sound and 'voice'. How did that come about? Can you pinpoint the crystallisation of the game's musical signature?

It was interesting – originally, the Elizabeth character was not nearly as significant. At E3, when they were showing some early in-game stuff, there was so much reaction to this character that it began affecting how things were structured – a moving target from the composer's standpoint – because things did change significantly. This was a seminal moment in how the score evolved. I remember specifically realising – 'okay, Elizabeth is very significant' and I said to music director Jim Bonney I have an idea for a theme for her and I think it's important. I want to record it with live musicians before I present it. I knew that Ken Levine (game director) really responded to live players and the emotion they brought to the table, so I didn't want to use samples – especially as it involved solo instruments. I also knew there wasn't any budget for this 'experiment' so I said, you know what? I don't care. I'm just going to go and pay for it myself – which actually wasn't terribly expensive as it was simply a viola and cello with overdubs to create a quartet kind of sound. (Along with most of the score, this was recorded at Martin Sound in LA.) When Ken heard it, he was very moved and it affected his view of how the music would work and how crucial it would be. The simplicity of that raw emotional music led us to realise that small string ensembles would be the direction for the score. They did reimburse me, by the way!.

> **"It's a hard business to be in – to be a composer – but when it all comes together, there's just nothing like it. I'm really blessed."**
> **Garry Schyman**

You've previously intimated that you feel one of the most important factors in BioShock's music success lies in the creative collaborations involved. Just how important is that?

In general, the most creative music I've ever been asked to write has been on videogames and I think what people like about this score is that it's different from typical game music – and that's not just about the composing, it's also the fact that *BioShock Infinite* is such an unusual game. Plus, it's down to the fantastic creative partnerships I have with Ken Levine, Jim Bonney, and Patrick Balthrop. They generated a fascinating and bizarre, crazy, super-creative world and then asked me to write some very unusual music…

It's a very creative process – not without difficulty, as in every project, but because of that struggle and experimentation, it made us generate a very interesting score – and I think that's what people have reacted to. I was really into it and I felt very passionate about it. I was moved and it moved other people – and that's very satisfying. ■

Catch Garry
'live' at this year's Game Music Connect where he will be featured in The BAFTA Interview, in association with The British Academy, as well as contributing to other panel sessions examining the art, craft, process, and business of creating best-of-breed videogame scores, from commissioning to implementation.

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